THE AUTOMOBILE

WEEKLY — NEW YORK — SATURDAY, OCTOBER 31, 1903 — CHICAGO — 10 CENTS

Club for Women Motorists in England.

THOUGH the women of the highest circles in Great Britain as a rule have less pin money and smaller independent fortunes than their American sisters, to them belongs the honor of energetic initiative in forming an automobile association intended exclusively for the benefit of the fair sex. This has recently been brought in evidence by the fact that the Ladies' Automobile Club of Great Britain and Ireland is now established in winter quarters at the Hans Crescent Hotel. At this hotel the club has secured for six months a large drawing-room on the ground floor which is reserved for the exclusive use of the club and is fitted up as a reading and writing room. It is very well adapted for a lecture room and the committee on arrangements are planning for a course of lectures on motoring subjects during the winter.

Not only will lectures be given but the plan of the club embraces practical lessons in motor car driving. Some of the best drivers in the kingdom are among the fair sex. Lady Cecil Scott Montague, one of the vice-presidents and the real organizer of the club, drives a 24-horsepower Daimler and a 22-horsepower Daimler, the latter a new racing type; Mrs. Gerard Leigh drives a Charon-Girardot and Voight, and Lady Beatrice Rawson uses a Panhard and sometimes the Motor Manufacturing Com-

Lady Beatrice Rawson, Vice-President.

Mrs. Gerard Leigh, Vice-President of the Club.

Miss Kate D'Esterre Hughes, a California Girl, Secretary pro tem.

Hans Crescent Hotel, Headquarters.

Assembly and Reading Room.

OFFICERS AND QUARTERS OF LADIES' AUTOMOBILE CLUB OF GREAT BRITAIN AND IRELAND.

pany's car. The young woman who is secretary pro tem to the club is a California girl, Miss Kate D'Esterre-Hughes of San Francisco. She is the only woman in London who has had practical experience in a men's automobile club. She was secretary to the secretary of the Automobile Club of Great Britain and Ireland for two years. Probably no club in Great Britain is so exclusive as this of the Ladies' Automobile Club.

If the success of the organization be assured, it is said that the members will ask Her Majesty Queen Alexandra to become president of the club.

The members of the Ladies' Automobile Club will undoubtedly have all the advantages accruing to the men's club. The privileges will include membership to the Motor Union, the receipt of the Automobile Club Journal sent to each member weekly, and special attention from repairers appointed all over the country by the men's club. Arrangements, too, will also be made with the French Government whereby members of the Ladies' club may obtain papers at the men's automobile club, by which the necessity of going through the customs formalities on introducing cars into and taking them out of France will be avoided by women motorists. Members of the ladies' club will receive instruction in driving upon the same terms as those of the men's organization.

On July 3 a letter was sent by one of the committees in charge of the formation of the club in which it was proposed that members should take up debentures and thus enable the committee to start the club on a large scale, but the response to this letter was not such as to justify the movement, and it was decided at their meeting on July 15 that it would be wise under the circumstances to embark on nothing beyond temporary business. In accordance herewith the room at the Hans Crescent Hotel was secured for six months from October 1, at an inclusive rental of £100. Though fitted up as a reading and writing room, this room is also available for 5 o'clock tea, and the first function of this kind was held on October 1 and was a very "smart affair."

The amount of subscription is £2. 2s. 9d. per member in both town and country. The three vice-presidents are Lady Cecil Scott Montague, Lady Beatrice Rawson, and Mrs. Gerard Leigh.

In view of the scant market supplies of crude rubber and the active consumption, it is not strange that notices relative to an advance in prices "on account of the increased cost of the raw material" have been sent out during the past few weeks by the various tire manufacturers. The rise in rubber prices has been steady for several months past, and present quotations, it is claimed, are the highest in the history of the trade, with the possible exception of a short period in 1882 when the market was at high water for some two or three weeks.

EXCURSION TO ST. LOUIS NEXT ENDURANCE RUN.

MILES OUTLINES BOLD PLAN.

Clubs from Everywhere to Organize Automobile Expeditions for World's Fair in St. Louis Next Year—Bivouacking along the Main Route Contemplated with Complete Commissary Arrangements.

During the recent Manufacturers' Endurance Run from New York to Pittsburg, Windsor T. White suggested that the next endurance test be from New York to St. Louis during the Louisiana Purchase Exposition, and that automobile clubs throughout the country arrange "go as you please" trips scheduled to arrive at St. Louis on the same day as the cars in the Endurance Run. A rendezvous could be selected at some suitable suburban place and on the morning after the arrival at this last control, the Endurance Run cars and all tourists from North, South, East and West would form into a grand procession and drive into the city and to the Fair Grounds, where they would appear as a general exhibit.

Manager S. A. Miles, of the N. A. A. M., having returned from St. Louis, whither he went from Pittsburg after the termination of the Endurance Run to make preliminary arrangements for the exhibit of the association at the Exposition, states that a track adjacent to the Fair Grounds can be secured and arrangements made to have attached to the admission tickets to the Fair a coupon of admission to the field where the track is located.

Mr. Miles suggests that each car in the Endurance Run carry a tent and complete camping outfit, and that the cavalcade camp out during the entire run. Cars carrying sutler's supplies and provisions, to be bought at convenient stopping places *en route*, would accompany the run, and each evening the entire party would go into camp in a field rented for the occasion, instead of putting up for the night in town. Cars fully equipped to make repairs would be in attendance, there would be less of individual competition and more co-operation for the common good of automobilism and the Endurance Run party would proceed across the country after the manner of an army train, cooking its own meals, making its own repairs and relying upon itself entirely for everything, save, of course, the provender. Commissary wagons, of necessity, would be numerous, and the cavalcade would be compelled to halt early in the afternoon to pitch camp and prepare for the night. There need be no noon halt, as the motorists could provide themselves with luncheons, and the day's run would be from about 8.30 or 9 A. M. to 3.30 or 4 P. M., and would cover on an average about 100 miles. It would necessitate hard work for the cooks and helpers and the steward and his corps of assistants, but out of the brief period of "circus life" would evolve a vast amount of good for the cause of automobilism. The ability of a large party of automobilists to tour fast and far and at the same time rely entirely upon its own resources, would be established.

Upon the arrival at St. Louis the Endurance Run party would go into camp on the field of the track adjacent to the Fair Grounds and remain in camp for several days, the camp being open for the inspection of visitors. During this period the races and various automobile contests would be held. The camp would be the converging point for automobilists from all over the country, and the greatest gathering of motorists in the world would be assured. The novelty of the whole affair would attract universal newspaper and public interest, and provide experiences enough for a lifetime for those participating.

POWER-STEERED ELECTRIC TRACTORS FOR COMMERCIAL VEHICLES.

An invention covering an improved steering mechanism for electric tractors, was patented in Italy some time ago and is to be put on the market in the United States in the near future.

Briefly, the mechanism provides a means by which hand-power steering is anticipated by electric steering. This result is attained by varying the intensity of the current as it passes to the motors, independently of the controller, so that

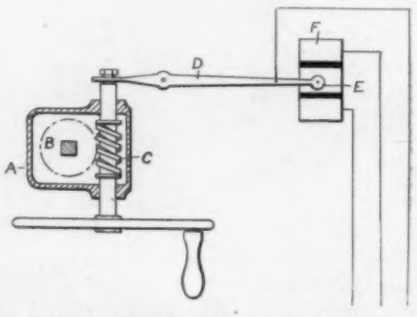


DIAGRAM OF POWER SHIFT AND STEERING GEAR.

either of the wheels can be driven at a higher rate of speed than the other, when it is desired to turn, the curve described depending on the excess speed of the outer wheel over that of the inner wheel. The tractor is locked in the position dictated by the driving wheels by means of an ordinary worm and pinion steering mechanism which is operated by a hand wheel. No effort in steering the vehicle is required of the operator, although the tractor supports the entire weight of the storage battery and mechanism and a considerable proportion of the weight of the vehicle.

Reference to the accompanying diagram will indicate the very simple mechanism used to attain the results described.

The steering column is vertical and of such shape as to accommodate the electric controller. The upper part is square, as shown at *A*, Fig. 1, to admit the pinion *B*,

which is fitted to the squared end of the steering rod, and the worm *C*, which actuates the pinion. When the steering wheel is turned there is nothing to prevent the endwise movement of the worm, until it strikes the inside wall of the square box *A*, which takes the end thrust, whereupon the worm actuates the pinion, communicating the movement of the handwheel to an ordinary gear and sector steering mechanism mounted above the tractor. The end play of the worm *C* is utilized to move a switch lever *D*, which is pivotally arranged so that the brush *E* is moved over the surface of the flat commutator F, when the steering wheel is turned, before the movement of the wheel is communicated to the mechanical steering mechanism.

When driving straight ahead the brush rests on the middle bar of the commutator at which time the potential of the current admitted to either of the two motors is equal; when the brush rests on either of the other commutator bars the potential is increased in the corresponding motor, according to the arrangement of the connections, so that one motor develops more power and speed than the other and the tractor turns accordingly.

The general appearance of the new tractor is shown in Fig. 2, which also illustrates the steering column, showing the position of the steering wheel.

A storage battery of forty-two Exide cells is used in the tractor now being tested in New York, which supplies the power to two 2 1-4-horsepower enclosed compound motors, spring-suspended from the axle. Six forward and two reverse speeds are provided. The gear ratio from the motor shaft to the driving wheels is 10 to 1. A light reach, swiveled under the middle part of the tractor, extends back to the ends of the rear axle in two branches. The object of this arrangement is to equalize the pull of the tractor, so that the entire strain in driving will not come on the king bolt. The battery is supported on two semi-elliptic springs at the sides and a transverse semi-elliptic spring at the rear, none of which can be seen in the photograph.

ELECTRIC POWER-STEERED TRACTOR ATTACHED TO DELIVERY WAGON.

The entire body of the vehicle drawn by the forecarriage is available for storage space, and the construction of an ordinary delivery wagon does not have to be strengthened, the entire weight of the battery and mechanism being supported by the tractor. This tractor is the invention of Eugene Cantono of Rome, Italy, a captain in the Engineering Corps of the Italian Army. The patents covering the mechanism are owned by the Marquis G. Mezzacorati, a Florentine capitalist who is now in New York. Jean Lavergne of Venice, a civil engineer, is in charge of the practical experiments now being conducted with the equipment with a view to its use in merchandise delivery service.

A company known as the Cantono Tractor Company has been formed in New York, and arrangements to manufacture and introduce the system are now being made. A seven ton truck fitted with the Cantono tractor is soon to be built to demonstrate the application of the device to heavy vehicles.

COMPOUND GASOLINE MOTOR CAR TRIED ON 400 MILES TRIP.

D. F. Graham has rendered a report to the stockholders of the Graham-Fox Company describing a trial trip made with the company's improved model 16-horsepower tonneau car equipped with the Graham compound gasoline motor. Aside from the construction of the motor, the mechanism of the car—which is shown in the accompanying illustration—includes other novel features. The clutch works inside of the gear case, in oil; the support of the engine and gear case and the alignment of

GRAHAM-FOX 35-HP. COMPOUND GASOLINE MOTOR CAR.

gear shaft, the chain adjustment and the automatic lubrication, are points in the design which have been worked out independently of customary methods.

The trial run covered 400 miles, from the factory on West 67th Street, New York, across Staten Island; from Perth Amboy to Bordentown, Mt. Holly, Trenton, Camden, Pleasantville, Absecon, Fort Republic, Manahawken, Lakewood, New Brunswick and back to the factory over Perth Amboy. On the whole trip four passengers were carried and a box weighing 400 pounds, containing tools. It was found necessary to remodel the steering gear on the way, as it developed too much lost motion, but otherwise the running qualities of the car improved with use. From the factory to Pleasantville the average speed on the road was 13.7 miles per hour. From Pleasantville to Manahawken, over exceedingly sandy roads, it was 10 miles, and from Manahawken home, a distance of 145 miles, it was 23.8 miles. It is the intention to fit cars of the same pattern with 35-horsepower compound engines instead of the 16 horsepower engine so far used, and the dimensions and strength of the parts and running gear have been calculated with this change in view.

SELDEN PATENT WAR BEGINS—SUITS AGAINST FORD AND DUERR.

The serving of papers in a suit in the United States Circuit Court for the southern district of New York by the Electric Vehicle Company, which controls the patent, and George B. Selden, the patentee, against the Ford Motor Company of Detroit and C. A. Duerr & Company, its agents in New York, marks the opening of the Selden patent war. The members of the A. L. A. M. are associated with the Electric Vehicle Company as licensees under an agreement to recognize and defend the patent. It was to be expected that if suit was brought the Ford and Duerr companies would be the first to be called to court, since the former has advertised that it will protect all agents and users of its cars and openly defied the A. L. A. M. The outcome of this suit will be watched for with keen interest by all in the American automobile industry.

The directors of the Ford Motor Company held their first annual meeting in Detroit on October 15 and, after three and one-half months of corporate existence were able to declare a substantial dividend. The officers and directors as re-elected are: President, John S. Gray; vice-president, Henry Ford; secretary, James J. Couzens; directors, John S. Gray, Henry Ford, A. Y. Malcomson, J. Anderson and J. Dodge.

Liability insurance, protecting automobile owners against damage suits, is now written by Geo. E. Grover, 60 State Street, Boston, Mass., in which policy he assumes liability up to $5,000.

COMPLETE MOTORING COURSE BY BOSTON Y. M. C. A.

TWO HUNDRED SCHOLARS SIGNED.

Manufacturers Aid the Plan by Placing Cars at Disposal of School for Dissection and Demonstration.—Large Corps of Teachers Appointed.—Lectures to Commence in November.

Special Correspondence.

BOSTON, Oct. 28.—Boston's automobile school, the first of its kind in this country and probably in the world, will be opened next Tuesday evening in the Young Men's Christian Association building on Boylston Street. It is to be conducted by the association in connection with its regular evening course, and will last about four months. When it was announced several months ago that an automobile school was to be organized the idea met with approbation on all sides, and ever since that time the promoters have received a constant stream of inquires, not alone from people in this State, but from those interested in motor vehicles in other States, and even from automobilists in England and France. These letters showed that there is a great need of some school where owners may become thoroughly acquainted with their machines and those of other makes; where prospective owners may prepare themselves to judge wisely in selecting a car, and may learn to handle it afterward; where chauffeurs may study the intricacies of all sorts of cars and learn how to make repairs; where men may qualify as expert chauffeurs; where automobile machinists may be trained, and where draughtsmen may have special instruction in motor car designing.

All these needs the new school is intended to meet, and already over two hundred persons have signified their intentions of becoming students. Among them are experienced automobilists, clubmen of independent means, business men, doctors, lawyers, students, machinists, chauffeurs, automobile agents and salesmen, and men of other classes who have had no experience with the automobile. Agents and manufacturers have aided the school in every way possible by offers of cars, parts, accessories and expert machinists when possible. The school proper, however, is to be on nonpartisan lines, with favor or fear toward none. The manufacturers, however, are to be given a special opportunity to demonstrate their cars to the pupils of the school.

The teaching force of the school consists of Albert L. Clough, an electrical engineer of wide experience, who has made a special study of gasoline engines; Parker H. Kemble, consulting engineer of the Cramps, an expert in steam engines; J. Arlington White of the Electrical Storage Battery Company, and M. H. Merrill of the Westinghouse Electric and Manufacturing Company, both authorities on electric vehicles, and George E. W. Armstrong, an automobile draughtsman and instructor in mechanics at the Massachusetts Institute of Technology. The advisory board consists of Col. James T. Soutter, president of the Massachusetts Automobile Club and of the New England Automobile Association; George H. Lowe, N. E. manager of the White Steam Carriage Company; A. F. Neale of the Overley Electric Company; Isaac H. Davis, vice-president of the Crest Manufacturing Company; Dr. Walter G. Chase, chairman of the Y. M. C. A. educational committee; and J. S. Hathaway, secretary. Frank D. Speare, educational director of the Y. M. C. A., has general charge of the school.

Instruction will be given in three regular and two supplementary courses. The regular courses are designated A, B and C. Course A is designed to meet the requirements of the larger number of students, and will be open to both ladies and gentlemen. It will consist of sixteen illustrated lectures on Tuesday evenings, beginning November 10 and ending March 8. These lectures are to deal with the fundamental principles of all the different types of cars, their operation, adjustment and care. They will be as free as possible from technicalities and will be illustrated with stereopticon views and parts of carriages. The arrangement of lectures will be as follows:

STEAM VEHICLES

November 10, 17, 24; December 1, 8, 15.

I. Steam as Applied to Road Locomotion—Ancient and modern history of the steam motor car.

II. Motor Car Boilers.—Fire tube, water tube and flash boilers; their design, manufacture and maintenance. Gauge glasses, feed and safety valves and steam gauges.

III. Engines of Steam Motor Cars.—Single-acting, double-acting, simple, compound; their design and manufacture. Throttle valves, relief cocks, by-pass valves, fusible plugs, oiling gear.

IV. Auxiliary Machinery of Steam Motor Cars.—Pumps: air, water and gasoline; steam-pumps and hand-pumps—ejectors, regulators of steam, air and water; thermostats. Burners: kerosene and gasoline. Alarms and safety appliances.

V. Care and Small Repairs of Steam Motor Cars.—Boilers, engines, auxiliaries, running gear, chains, chainless gears, burners, torches.

VI. Steam Motor Cars as Freight Carriers.—Trucks and vans, light and heavy delivery wagons, traction engines.

GASOLINE VEHICLES.

January 5, 12, 19, 26; February 2, 9.

I. The Construction and Operative Principles of the Gasoline Motor.—General discussion of its carburation, ignition, cooling, lubrication and muffling methods. The Otto-cycle and the two-cycle and their relative advantages and disadvantages.

II. The Gasoline Engine as Applied to Automobiles.—Its advantages and disadvantages as compared with the other motive powers. Types of automobile engines. Single and multi-cylinder forms and high and low speed types. Methods of engine speed control.

III. The Change-speed Gear.—Belts, sliding gears, planetary gears, individual clutch systems. The frictional system. Variable-throw devices. Method of driving. The single-chain method with live axle. The countershaft and dead axle system. Chainless driving. The equalizing gear.

IV. Current American Practice.—In running gears, steering gears, and in cooling, ignition and lubricating devices. Brakes and controlling devices.

V. Inspection of Gasoline Vehicles.—Road derangements, their location and remedy. Spare parts and supplies.

VI. Hints Regarding the Operation of Gasoline Cars.—The ideal runabout and the ideal touring car. Possible future developments.

ELECTRIC VEHICLES.

February 16, 23; March 1, 8.

I. Electricty as a Motive Power in Vehicles.—Its practicability, cost and efficiency.

II. Storage (or Secondary Battery).—Theory of; brief history; component parts; grid: jar (or cell); elements; positive plate; negative plate; materials used in process of manufacture; "forming" plates; separators; lugs; lead burning; assembling into battery; electrolyte; specific gravity; ampere-hour capacity; charging; discharging; testing cells; voltage of cells; "dead" cells; reversed cells; short circuit in cell; washing cells; overcharging; gassing; efficiency. Life of positive plate; life of negative plate; life of battery; renewals; gains in efficiency and life over preceding types; improvement in connecting cells obviates (former) lug breakage made in increasing mileage; responsiveness of a battery to proper treatment. The use of material other than lead in the construction of an accumulator. Commercial disadvantages of such types. The further probable gain in efficiency of the leading automobile accumulator.

III. Application of Power to Wheels.—Motor: principles of; parts of; series wound; high speed; low speed; advantages and disadvantages of each. Wire and wiring: resistance coils; cut-out switch or plug; controller; single and double motor equipment; gearing; reduction ratio; graduation of speed—multiple, series, and series-multiple control; reversing; electric brake, lamps, bell; voltmeter; ammeter.

IV. Charging Outfits.—Switchboard and rheostat for charging from D. C. 110 volt circuit; in public garage; private outfits for charging two, three or four vehicles; motor-generator sets; direct-connected A. C. generator; engine-driven sets; charging panel, automatic circuit breakers.

The second course, B, is to be of a technical nature and will aim, by giving a complete working knowledge of automobiles, to educate skilled draughtsmen. This course meets twice a week beginning November 6.

Course C is in shopwork and supplements in a practical manner the instruction given in Course A. It is designed for owners and those preparing as chauffeurs. This course is to be given in the Park Square Automobile Station, where there is a good floor space and a complete mechanical equipment. It will meet on Monday and Friday evenings, beginning November 6. Students are to be taught the construction and operation of cars, how to make repairs, and the use and abuse of every part of the machinery. While the lectures in Course A are on steam vehicles, the shop work will be upon this class, and the same rule will be followed regarding gasoline and electric automobiles. Practically all of the domestic makes of vehicles and many of the foreign makes will be dissected and analyzed in this course in an unbiased and scientific manner. An opportunity for the demonstration of the relative merits of the automobiles used in the school is offered the manufacturers in one of the supplementary courses. On Saturday afternoons, either in the association building or at some garage, the manufacturers will explain the points of their cars. For this purpose one car of a make will be taken to pieces and explained by the manufacturers, while another car of the same make in charge of an expert chauffeur, will be on the street for road demonstration. The manufacturers are very generally favoring this plan, and it is thought that every Saturday afternoon one or two cars will be demonstrated.

The other supplementary or extra course will be entertaining as well as instructive, and will consist of occasional illustrated lectures on general automobile topics. The first lecture will be upon, "The Legal Rights of the Automobilist," and will be given by a prominent Boston lawyer. The other speakers have not been fully decided upon, but the list will include the most prominent automobilists in the country and men of international reputation. The association will hold examinations in courses B and C and will issue certificates of proficiency. It will also maintain a chauffeur's bureau of registration and employment. The charge for Course A is $7, or $3 for any one group of lectures; for course B, $10 and an association membership of $5; for Course C, $15, or $5 for any one type of carriage, and an association membership of $5.

Lest New York Show Split in Twain.

Unrest Among Unlicensed Manufacturers Fearing Influence of A. L. A. M. Upon Show Arrangements.—Assurances to the Contrary.

Will the fight which rages between the supporters of the Selden patent, known as the Association of Licensed Automobile Manufacturers, on one side, and the larger number of manufacturers, on the other side, who refuse to acknowledge any master patent for gasoline motor vehicle construction—will this fight be carried from the courts of justice and the advertising pages of the press into the next national automobile show to be held in Madison Square Garden in New York January 16–23, 1904? Will the members of the licensed association take advantage of their control in the directorate of the National Association of Automobile Manufacturers to reduce the independent, nay fractious, members of the industry, spite of their larger number, to a subordinate and inconspicuous position before the show-visiting public?

These questions have been asked repeatedly in New York of late, with some misgivings as to what the result would be for the success of the show and its value to the public if the twenty-eight or thirty licensed manufacturers were to monopolize the exhibition space and placard the exhibition hall with warnings to the public against infringing the Selden patent by patronizing their unlicensed competitors for trade.

Notwithstanding that the National Association of Automobile Manufacturers, which practically controls the exhibition, is in honor bound to protect all of its members, licensed and unlicensed, in equal measure, and would naturally be expected to strive for profits for the show, as a business enterprise, by making the exhibition as large, varied and representative as possible, the disquieting rumors of partiality and sinister designs intended to mold public opinion by unfair means and force the rebellious members of the industry either to submission or to the act of hara-kiri, have drawn some nourishment from two established facts, namely, that persons closely identified with the management of the licensed association are also clothed with power, which they may use or abuse, to dictate the course of action to be adapted by the national association, and, secondly, that the licensed association lives and breathes cheek by jowl with the national association in the Transit Building, 7 East Forty-second Street, New York City, their councils separated only by one frail door.

The annual automobile show is held under the joint auspices of the National Association of Automobile Manufacturers and the Automobile Club of America, in conjunction with the Madison Square Garden Company. The owners of the exhibition building have no interest in automobile matters further than to profit by the annual show, and the Automobile Club of America, of late, has practically relinquished active interest in trade matters, leaving the National Association of Automobile Manufacturers the leading factor in the approaching exhibition.

"This being the existing condition, we depend," says the anxious independent manufacturer and intending exhibitor, "practically upon the conscience of the members of the executive committee of the N. A. A. M. to act in fairness to the Garden company and the Club and their willingness to set aside their own personal advantage, as members of the A. L. A. M., for the sake of some paltry profits from the show—to be divided in three portions—and for the sake of benefiting their competitors, the same whom on all other occasions they ardently desire to destroy and utterly annihilate."

This interesting situation, red-hot apparently with conflict of emotions and business considerations, unless cleared up might affect the success of the New York show. Its veiled, insinuating threats might force the difference between the two factions of the industry—which, after all, is mainly one relating to the best ways and means for mitigating the curse of mutual cut-throat competition—to a bitter crisis, from which there would be no easy

transition to the liberal and conciliatory course which in the end must prove best for all, the public especially included.

"First of all, let us have a public and unequivocal expression of intentions from the N. A. A. M.," said one independent manufacturer who is a member of that association and personally not much alarmed over the outlook. "That will probably settle all talk of secession and nip in the bud all idea of holding two shows, one for the licensed manufacturers and another for the independents in New York.

"But if it does not have that effect, it should have the opposite one of uniting the opponents of the licensed system, while it is not yet too late, and put them in position to hold a good show of their own, say in March or April."

The idea seemed to promise a settlement of the unrest, and an expression on the subject was consequently solicited from those in control of the association's affairs.

S. A. Miles, manager of the association, stated that there is to be absolutely no discrimination between independent makers and those licensed under the Selden patent, at the New York show, or at the Chicago exhibition, of which he is also manager. In discussing the matter he said:

"The suggestion that the licensed makers will attempt to intimidate buyers by displaying signs warning them against buying the goods of independent makers is unfounded. I have the assurance of two officials of the licensed association that no such plan has ever been discussed. So far as the National Association of Automobile Manufacturers is concerned, it has never received any official knowledge of the existence of the Selden patent or of the association that now controls it. Independent and licensed makers will be treated with equality just as if the licensed association had never been formed, and you will see that the independents will not hesitate to exhibit at either the New York or Chicago show on the strength of these absurd rumors that are going the rounds of the trade Why, the whole idea is too ridiculous for serious consideration by people who are familiar with the conditions under which the shows are held.

"The members of the licensed association have never suggested directly or indirectly that any favors be shown them, but, on the contrary, they seem quite content with the arrangement as it now stands. It is true that several gentlemen who are representatives of members of the licensed association are also members of the executive committee of the national association, and that Mr. Budlong is president of both the national association and the Electric Vehicle Company, which controls the Selden patent. But these gentlemen do not attempt to control the board of the N. A. A. M., and their actions, at all times, have been so open and above board that the licensed association has hardly been mentioned, and certainly has never been allowed to influence the actions of the executive committee of the N. A. A. M. The president has been outspoken in his determination not to allow the affairs of the licensed association to influence those of the national association in any way, and his actions have been in keeping with his utterances. The same is true of other members of the A. L. A. M., who are also members of the national association.

"The Association of Licensed Automobile Manufacturers has only twenty-eight members, and they are all engaged in the manufacture of gasoline motor cars, whereas the N. A. A. M. has 140 members who make all sorts of cars, parts and accessories. It is the national association's business to protect its members in all matters wherein all the members are on the same footing, so that to consent to any discrimination would be a definite breach of the rules of the organization. You can depend upon it that the members of the A. L. A. M. have too much business sense to alienate the good will of the public by any actions that might be regarded as an attempt to take an unfair advantage, even if they should so far forget their allegiance to the national association as to take any action that might injure its interests. Existing differences between the licensed and unlicensed automobile manufacturers will be settled in court and not at the coming automobile shows, either in New York or Chicago."

Frank W. Sanger, manager of the New York show, could not be found at his office, but Mr. Young, secretary of the Madison Square Garden Company, said that applications for space equivalent to about two and one-half times the capacity of the Garden had been received the first week, and that the entire country was represented, including licensed and unlicensed manufacturers. Only one prominent manufacturer among the independents had failed to file his application previous to Monday of this week. Mr. Young did not hesitate to say that every exhibitor would have an equal opportunity to display his goods and that no attempt on the part of certain manufacturers to discountenance others would be permitted. Mr. Young called attention to rule one, governing the character of the exhibits, which reads:

"The management reserves the right to decline and prohibit any exhibit, exhibitor or proposed exhibitor or exhibits not approved of by the management. This reservation covers matter and conduct, printed matter, souvenirs and emblems, and all things which affect the character of the exhibition. Exhibitors shall have the right to distribute approved-of catalogues and price lists only from the spaces occupied by them."

An Important Correction.

A regrettable misinterpretation of descriptive matter sent us regarding the 1904 Eldredge runabout was responsible, in our issue of October 17, for a confusion of identity between that machine and the more powerful road car of the same make, described and illustrated last April 4. Both machines, the manufacturers write us, are part of their regular line and will be continued next year. The larger machine will retain the four-cylinder motor, and its secondary current will continue to be commutated, the makers stating that the apparatus for this purpose has proved absolutely successful and that it will not be changed.

Muir Syndicate's Steam Street Sweeper.

When President Roosevelt made his Western tour the name of John S. Muir, if the writer mistakes not, was occasionally mentioned as one of the President's personal friends and companions. Farther back in the period when the tire industry, developed through the popularity of the bicycle, hailed the motor car as an adventitious aid for the preservation of its business, the same name was associated—again if the writer's memory is correct—with the production of pigskin tires; laminated pigskin tires with the laminae on edge against the ground. The seat of the production of these tires was in Scotland, and their good qualities were defended by their maker with an unusual display of wit and humor, extending to his communications to the trade press which were usually accompanied with some little pigskin souvenir. Intrinsic evidence from the style of the communication—nothing more—suggests that the same personality signed the name of John S. Muir, in indelible blue, to a carbon-copied circular letter to the trade—accompanied by excellent photographs of his sweeper—which reads as follows:

Thinking that the following subject might be of interest to the readers of your valuable sheet (being as it is a deviation from the even tenor of automobilism), I take great pleasure in describing, for the mutual benefit of yourself and the public, the details of a machine invented and constructed by myself for the purpose of sprinkling, sweeping and removing all foreign and objectionable matter from the public streets.

I have become associated (through the efforts of ex-Congressman John B. Corliss) with a number of prominent business men of Detroit, who, like Mr. Corliss, also warmly advocate clean city streets. Among the most prominent of these are two who are by no means strangers to the automobile trade. As they appear in the photos they will no doubt be recognized by their numerous friends as the owners of one of the largest factories in the country for the production of automobile parts. For the benefit of those who, as yet, have not the pleasure of their acquaintance, I will say that these two are Messrs. B. and F. Briscoe, respectively President and Treasurer of the Briscoe Manufacturing Company.

The sweeper is equipped with a ten (10) hp. Fox valveless steam engine and a ten (10) hp. Salamandrine boiler. When running the vehicle is almost noiseless and can travel eight (8) miles per hour. The extreme length is fifteen (15) feet; extreme width, six (6) feet; the height to the operator's seat is seven (7) feet, and the weight is 5,840 pounds. The machine can do the work of fifteen or twenty men and is simply and strongly built. It is going to be a great money-saver for municipal authorities to consider. As is mentioned elsewhere, the fuel is either gasoline or kerosene of which twenty-eight (28) gallons can be

carried. The sprinkling tank will hold 109 gallons and can be filled at any source of water supply.

This sweeper is designed to contend with all conditions of city streets, both in and out of repair. It sprinkles the surface to be made clean as it goes along; thus dust never has to be handled. The machine is operated by steam, but no exhaust steam is lost as the condenser reduces all exhaust back to water and returns same to water-tank. The entire machine is, at all times, under the control of the operator.

It is the intention of this company, which is at present known as the "Muir Syndicate," to place upon the market a line of commercial vehicles so simple and strong in construction, as to be able to wholesale and retail them at prices that will place the company absolutely alone in this field. When the syndicate gets into full fighting trim, housed in a new factory, there will no longer be any excuse for harboring that evil-smelling disease-spreading street-destroying barbarous method of transportation, "the horse," within city limits. We are going to drive him out into the open country where he can eat his food as he helps to produce it. Our delivery wagons and trucks, for handling loads of from 2,000 pounds to eight tons, will be the simplest, strongest and most reasonably priced vehicles that you have ever had the opportunity of either illustrating or mentioning in your publication.

MUIR SYNDICATE'S STEAM STREET SPRINKLER AND SWEEPER.

Colgate Hoyt of New York recently drove his touring car from Philadelphia to Washington in eight hours, which he claims is the record for the distance. Mr. Hoyt made the record run on a trip from New York to Gettysburg.

ALLOTMENTS OF SPACE FOR MANUFACTURERS AT ST. LOUIS FAIR.

Manager Miles of the National Association of Automobile Manufacturers, states that the most desirable section of the Transportation Building at the St. Louis World's Fair has been secured for the exhibit of the N. A. A. M. The association, he says, has been granted 65 per cent. of the space for which application was made, which amounts to 45,000 square feet, exclusive of aisles. In addition to this the association will have an office, 20 by 40 feet, for its exclusive use. A plan of the allotments of space for the members of the association has been drawn up and will be submitted to the executive committee at its meeting on Wednesday next.

ACETYLENE GAS TO RAISE AND SINK SUBMARINE BOATS.

The peculiar property of calcium carbide of rapidly developing acetylene gas, when brought in contact with water, has led to its utilization as an effective means for raising and sinking submarine boats, writes U. S. Consul-General Guenthe from Frankfort, Germany, quoting the *Cologne Gazette*. The boat is supplied with an ordinary gas generator and a water tank, whose contents serve as ballast.

The upper part of the tank is connected with the gas reservoir of the generator by a pipe so that gas can escape into the tank. The tank and the generator have pipes at the bottom opening into the sea water. The upper parts have vertical pipes for the escape of the gas.

If the reservoirs (the tank and the reservoir of the generator) are filled with water, the boat sinks.

After the introduction of a carbide cartridge into the gas generator an immense quantity of gas is formed at once, which forces the water through the lower pipe into the sea. After opening the cock in the connecting pipe, the gas enters the tank and fills it by forcing out the water. The boat now rises to the surface, remaining there until the gas is allowed to escape from both reservoirs, which causes them to to be again filled by sea water.

If the boat has sunk deeper than desired, the introduction of a sufficiently large carbide cartridge into the generator will make the boat rise to the proper level. The apparatus is quite simple and works reliably, doing away with air and water pumps.

Mementos for Owners and Drivers.

BY R. B. BRAMWELL.

A ready way to test gasoline in the absence of a hydrometer is to pour a quantity of the doubtful fluid on the palm, moving the hand rapidly back and forth to aid evaporation. If the hand is left perfectly dry the gasoline may be used safely, but if an oily residue remains the gasoline should not be used.

There has been considerable discussion in the past as to whether the rear wheel and brakes on the transmission or countershaft brake should be applied when skidding is feared, as in driving over slippery asphalt. As the differential mechanism is the chief offender in skidding, however, and the side brakes if applied simultaneously direct on the rear wheels entirely nullify the action of the differential, it is safe to advise the use of the side brakes whenever side slip is feared. Of course if the driver is willing to negotiate slippery places at a speed sufficiently slow the brakes will seldom be required, and this course is the safest of all.

If the operator of a gasoline car has reason to doubt the proper action of the circulating pump he can test it in a ready way by feeling of the radiator. If the tubes are hot it is safe to assume that the water is circulating properly. If cold, either the supply of water is exhausted or the system is inoperative.

Protection Against Mud.

Practically all manufacturers now provide leather or pantisote aprons which are made to fit under the car, extending from the front of the motor case well back under the transmission case. This apron should come well to the sides of the underbody of the car. The protection afforded the mortor bearings, sparking mechanism and the clutch by the use of such a protector will of itself be quite sufficient to repay the owner for providing himself with one, even if the manufacturer has not already done so.

To protect the passengers and the car from the mud-slinging proclivities of the front wheels, and as an extra precaution, in addition to the front mudguards, leather squares may be hung from the bottom edges of the guards. These square should be arranged to swing freely so that they will brush over a road obstruction and will not be broken off.

Additional protection is afforded by the use of leather shields which are hung from each end of the front axle and at right angles to it. These guards should be suspended just inside the wheel bearings or steering joints, hanging well down near the ground.

The joints of the steering wheel connections should be encased in a leather envelope, and these envelopes may be filled with grease previous to lacing them in place. This will keep the joints well lubricated and protected from mud, dust and water.

Nowadays the rear axle mechanism, including the differential and bevel gears, is usually mounted within tight aluminum cases, but if not so protected leather cases may be fitted to great advantage.

Lubrication of Chains.

The care of automobile chains seldom receives the attention that it deserves. It is not sufficient to apply quantities of lubricant frequently; the chains should be thoroughly cleaned from time to time and this can be accomplished properly only by removing them and immersing them in kerosene or gasoline. Kerosene is preferable. If possible the chains should be allowed to soak over night and before removing them from the kerosene bath the joints should be worked to free them from all traces of caked lubricant, dust and dirt that is bound to find its way into the roller or stud bearings.

Any good grease forms an excellent lubricant but it should be heated and the chains immersed in it for half an hour. At the end of this time it will be found that the molten grease has found its way into the most closely fitted joints.

When dried and put into place the chains may be treated to an application of powdered graphite to advantage. This will add to the life of the previously applied lubricant and will prevent dust from adhering to the moist surfaces in a large measure.

A chain lubricant composed of sperm oil and beeswax has been recommended. The beeswax is first melted and the sperm oil added; when cold the consistency of the compound should be about that of axle grease. This is determined by the quantity of beeswax used.

Handling of Gasoline.

Not long ago a New York gentleman of prominence hired a French chauffeur who was soon togged out in an expensive livery.

Soon after his employment, while his brass buttons still wore their original polish and his uniform bore no trace of grease or wear, he filled the gasoline tank as usual. But the float stuck. Inquisitive as to the quantity of gasoline in the tank, the "shofur" lit a match and held it just over the filler opening. No, the gasoline did not explode, but there was a sudden burst of flame which enveloped the car and operator. A spectator grabbed a hand grenade and dashed its contents over the man and machine, soon putting out the blaze. When the excitement had subsided it was found that the "shofur's" uniform was striped with yellow and the brass buttons were tarnished beyond redemption, from the effects of the strong alkaline solution contained in the fire extinguisher.

The best way to put out a gasoline blaze is to smother it. That is to say, by preventing air from reaching the fire. A coat, rug, carriage robe or heavy or closely-woven material thrown on over the flames will soon extinguish them, or sand may be used advantageously.

If water is put on a gasoline fire it will make the matter worse, because the burning fuel will float on the surface of the water and in this way will be carried beyond its original limits. It is always advisable to fill the gasoline tank in the outside air or with the windows thrown wide open. To do it in a closed room is almost as bad as cleaning rugs with gasoline in a Harlem flat.

Poisonous Exhaust Gases.

A gasoline motor should not be operated in a closed room for any length of time unless provision for carrying the exhaust gases outside is made. While these gases are not explosive they are extremely poisonous, soon affecting the eyes and later the senses. In addition they quickly tarnish polished metal parts.

Cleaning Varnished Surfaces

Mud should never be allowed to harden on the painted surfaces of a car but should be removed immediately after the vehicle is returned to the private stable or public garage. Otherwise spots will be left that cannot be effaced. Plenty of water should be used in cleaning the paint work and it should be applied with a soft sponge, which must be immersed in the water frequently to keep it free from particles of grit, which will scratch the varnish. The sponge should be used as a vehicle to carry the water and not to rub the varnished surfaces. When the car is thoroughly cleaned the water remaining on the car may be dried with a chamois skin that has been rinsed in water and wrung out as dry as possible. Care should be taken to prevent the washing sponge and the chamois from collecting grease by touching any of the mechanism, otherwise a greasy stain will remain.

Exhaust Pipe Couplings.

The couplings on the exhaust pipe should be carefully watched when a car is new. It will be found that they are apt to work loose at first, owing to the expansion of the exhaust pipe when hot and its subsequent cooling. Occasionally tightening the couplings with a wrench will soon set them, after which they should require no further attention.

Grinding the Valves.

Motor valves require occasional grinding, the necessity being first evident by loss of compression. The exhaust valve will require more frequent attention than the inlet valve for two reasons; first, its seat is subject to much higher temperatures, because the valve is held open while the flaming exhaust gases are passing to the muffler, and, second, because the valve is closed by a very powerful spring.

It is advisable to grind a valve when the first evidence of "pitting" presents itself. If the operation is delayed more grinding will be eventually necessary, and more of the valve seat will be worn away in consequence. It will be understood that the exhaust valve seat, which is of cast iron, seldom becomes pitted; it is the valve that suffers.

The head of the exhaust valve is slotted like the head of an ordinary screw, and a screwdriver may be used to turn the valve during the process of grinding, after the inlet valve has been removed.

Very fine flour of emery mixed with oil, to prevent the emery from cutting, should be used. Care should be taken to prevent the slightest trace of this mixture from finding its way into the cylinder. A good plan is to tie a bunch of waste on the end of a string and push the waste down into the passage between the valve chamber and the cylinder. When the operation of grinding is finished, the waste may be drawn out by means of the string.

The valve should be smeared with the emery and oil mixture, put into place and turned first one way and then the other with a screwdriver. Do not make more than a quarter-turn at a time, but do it evenly, exerting very slight pressure. Then lift the valve away from its seat, give it a quarter-turn and reseat it, continuing the process of grinding as before. The object of lifting the valve occasionally is to free any foreign matter that might be in the emery powder, and also to make sure that the grinding is done evenly throughout. After having lifted the valve free from its seat four times and giving it a quarter-turn after each the surface of the valve and valve seat should be carefully cleaned and examined. If the surfaces are perfectly even with no depression or discolored spots the task may be considered finished. If not, continue the operation until this result is attained, applying more emery and oil if necessary. Eight or ten minutes of grinding should be sufficient to remedy a bad case of "pitting."

In cleaning the valve and valve seat, use a soft cloth or piece of waste soaked in kerosene to cut the oil and do the job very thoroughly, removing the last trace of oil and emery before carefully removing the waste from the exhaust passage which was inserted to prevent any emery from entering the cylinders.

The operation of grinding the inlet valve is similar to that described, excepting that the valve and valve seat may be removed from the motor, and the use of a screwdriver will not be necessary, because the valve can be turned with the fingers.

(To be Continued.)

Al Lawson, the baseball magnate and manager of the Reading, Pa., baseball team, proposes to employ automobiles to transport his players from one city to another as much as possible during the next season.

Passenger's Experience on Endurance Run.

After Finishing Test Traveler Agrees That Insane Asylum at Dixmont Should Have Been End of the Trip for All.

BY E. E. KELLER.

Being an enthusiastic user of the automobile since the day of the light steam runabout with nothing else available, the writer accepted with pleasure an invitation from the Haynes-Apperson Company to occupy a set in Car No. 31, a tonneau of their make, entered in the Endurance Run from New York to Pittsburg. Unfortunately, buiness matters prevented accompanying the car on the first day, so arrangements were made to meet it at Unadilla on the second day. The trains, however, were so far behind their schedules that the car was met at Bainbridge, ten miles east of Unadilla, where it had been delayed until Saturday because of some annoying troubles with the chain-drive of the circulating pump having held it back between Pine Hill and Unadilla sufficiently to put it just behind the heaviest part of the floods down the valley. The trouble with the pump drive had been easily remedied at a small machine shop in Bainbridge, and this proved effectual, as it gave not the slightest trouble during the remainder of the trip to Pittsburg.

UNDER DIFFICULTIES NEAR HARPERSVILLE, N. Y.

We left at 3 o'clock with many admonitions that it was foolish to attempt the trip, because it would be impossible even for horses and that we were in great danger of landing at the botom of a gully or in the river. We took to the mountains instead of following the road in the valley, and although we had many a hard climb to get around the floods, which were worst at Afton where the water was ten feet deep over the roads in many places, everything went well until reaching a point between Harpersville and Sanataria Springs, where we had to work the machine through water reaching above our knees, as there was no road around the spot unless we went many miles back and over the hills. We had been led to expect that we would strike no serious obstacles at this point. The machine was worked through this spot by throwing in the low gear and cranking the engine. This was slow but sure, although wet work. After reaching a point where the carbureter was above water, the engine started on the first turn and hauled us out, passengers and all, in good shape.

We had a number of further experiences of this kind, each one taking considerable time to get through, and in consequence we reached Binghamton only at 9 o'clock Saturday evening. The machine had not given the slightest trouble, and all of the delays were due to the road conditions. We had to make a long detour to get over a bridge several feet under water with the planking gone, just outside of Binghamton.

At 4 o'clock on Sunday morning a start was made towards Elmira and Bath, although we had been told that the trip was utterly impossible. Seven miles from the Bennett House we struck water over the road eight feet deep, and as there was no way around this point, we investigated the possibilities of the Erie railroad, running on an embankment here, and finally worked the machine onto the track and rode the ties for over three miles to Hooper Station. It was necessary to lay fence boards and such material as could be obtained over the trestles and culverts. The statement to us that a horse could not

go through was correct, but an automobile can do things that a horse can not. One of the contestants attempted to follow us on the railroad, but failed and had to be hauled back and off the track with a team.

The racking and strains thrown on the machine were terrific, and it seemed as though even the best of design and material would have to give way, but there was no apparent damage except to one radiator tube, which probably caught on a railroad tie and began to leak so much as to demand attention. We finally reached Union, where the radiator was repaired by sawing out one of the tubes and plugging it with pine plugs. This repair lasted into Pittsburg, and was made while breakfast was being prepared, so that no time whatever was lost because of it.

Everything went well until we reached ones to be found in Owego; and as tool steel was not available, soft steel was used and case-hardened. The repair was completed in a few hours, and we moved on over the hills into Owego, where the night was spent. This repair just mentioned gave not the slightest trouble on the rest of the trip. Undoubtedly the trouble was caused by the tremendous wrenching and jarring over the railroad ties.

With all of these troubles, the trip so far had warmed our hearts toward the people of eastern New York State, and especially to the farmers along the route, who went to great inconvenience in the rain and storm, signalling us with lanterns at night to prevent our getting into impassable and dangerous places. The ordinary city notion that the farmers are opposed to the automobile was completely removed from trigging the rear wheels with stones while resting. At one point we were obliged to travel nearly five miles on log roads over the mountains, in order to make a distance of one-quarter of a mile on the main road, all of which was under water, with the bridges gone.

After reaching Elmira late in the afternoon we believed the worst of our troubles to be over, and hoped that the rest of the road would be comparatively easy travel. The road to Corning was fair in spots, but the condition of the road and streets just outside of Corning is impossible to describe, or even to imagine. Working through the deep mire before reaching Corning, we had the misfortune to damage somewhat a connecting rod bearing because the oil pipe to the crank case had stopped up without being noticed. A couple of hours'

ROAD UNDER ELECTRIC RAILROAD FLOODED, LESTERSHIRE, N. Y.

RUNNING ON RAILROAD TIES, NEAR HOOPER, N. Y.

a point about three miles east of Owego, where the roads were again impassable and it was necessary to take to the mountains.

Since leaving Union there had been evidences of something not quite right in the mechanism under the car, but examination failed to indicate what was wrong, and it was attributed to the mud in the chain and other working parts. Just after turning off the main road near Owego the machine came to a stop on a slight grade with a noise indicating that some gears had been stripped. All of the mechanism, however, was found to be clean and in perfect order, excepting an indication of trouble in the differential. After taking apart the axle the trouble was disclosed in a lot of broken balls and ball races in the thrust bearing of the differential. Nothing else had been damaged; but here was a repair to be made requiring something more than a blacksmith shop. So we hunted up a small machine shop in Owego, owned by Mr. Ward Decker, which he kindly turned over to us to do with as though it were our own. New ball races were turned out, using somewhat smaller balls, the only our minds, as we received nothing but the kindest treatment and the most urgent invitations not to attempt farther travel, but to be made comfortable until the weather had improved and the floods passed off. We were several times obliged to avail ourselves of this extreme hospitality at meals, but could not afford the time to stay over night, as so far we had not averaged but about four hours' sleep, the remainder of the twenty-four hours being spent in attempts to go forward.

On Monday we managed to reach Corning, after spending most of the day getting through and around floods. In one place we were obliged to take a lumber road very seldom used. The road surface was mostly boulders and rock, and the grade in some places was so steep that the carbureter in the front of the machine was above the level of the gasoline tanks under the seat. Part of the distance up this mountain was made by one man blowing into the gasoline tank and keeping on sufficient pressure to force the gasoline up into the carbureter, while other exceptionally steep spots were overcome by throwing in the low gear and cranking the engine by hand, with someone work, however, remedied this trouble and put the machine in good shape.

On Tuesday morning, before daylight, the start for Bath was made, hoping that road conditions might be such as to permit of our reaching Buffalo before the next morning. But for ten miles out of Corning the road conditions were beyond description, and fair roads were not encountered until after Avon was passed. The road conditions from here on were considerably improved, but early in the night we found ourselves without gasoline somewhat unexpectedly.

Buffalo was not reached until about 1 o'clock on Wednesday afternoon, the delay being caused by further trouble with the connecting rod brasses, which, however, were put in good shape so as to give no further trouble into Pittsburg, and a start made from Buffalo at 3 o'clock Wednesday afternoon with the five regular occupants of the car happy but in rather jaded condition.

Erie was reached at about 9 o'clock, and two of the party were left to get some sleep until an early morning train, which would carry them to Cleveland. After

getting something to eat and filling tanks, the start for Cleveland was made at 11.30, and Cleveland reached at 9.20 Thursday morning with no noteworthy incident, excepting that the road was lost several times in the darkness. At Cleveland we were reminded of the entrance into Corning, only that the road conditions for several miles were even worse, if that is possible. The mud was axle deep and of such consistency that many times the rear wheels would revolve for several minutes before getting down to something to take hold of. But we finally reached the Euclid Avenue pavement, and were thankful even though we were obliged to go slow because of the slippery condition of its surface. During the night we had a number of narrow escapes from being ditched or running into trees, because the operators found it impossible to keep their eyes open at times, the regular and rhythmical sound of the engine having a rather somniferous effect. It was necessary for both occupants of the front seat to make strenuous efforts to keep awake, while the man in the rear slept as soundly as though he were in a Pullman, even though not as comfortable.

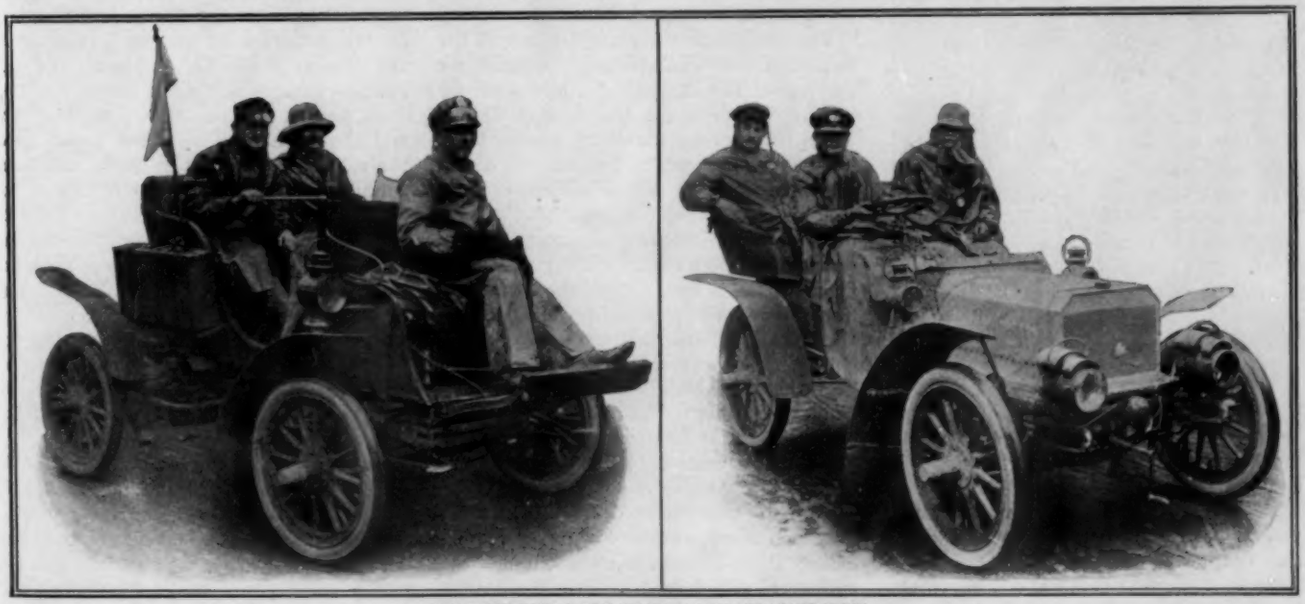
After oiling up at Cleveland and filling tanks, the machine was started for Pittsburg several hours after the advance guard had left Youngstown, the machine leaving Cleveland at five minutes of eleven in good condition and working finely. Unfortunately the roads were again muddy and slippery because of the rain, which started a couple of hours before reaching Cleveland. Everything went well from Warren and Youngstown in spite of the rain until near Petersburg, where the slippery condition of one of the steep downgrades made it almost impossible to hold the car down to a sufficiently slow pace to avoid accident. In going over some of the rocks and ledges in these so-called roads we had the misfortune to break both front springs and a rear spring hanger. This delayed the machine a couple of hours at a country blacksmith shop, and everyone was so tired at this point that it was decided to get a good rest and go to bed, instead of attempting any further night-running, as it would be impossible to reach Pittsburg before sometime toward morning in any case. The start was finally made a little after seven, with the roads in exceedingly slippery condition and a necessity of careful driving on account of the mended spring hanger, which might have been a better job of repairing.

The Pittsburg end of the road was reached shortly after three in the afternoon without trouble.

The whole endurance run was more of a test of the endurance of men than of machines, and any contestant delayed for but a few hours from any cause whatever at Pine Hill or near there was doomed to fight the entire distance against conditions that no ordinary tourist would attempt to overcome. As a friend of the writer aptly remarked upon greeting him, "The whole bunch should be at Dixmont, which would be the proper place for them to stop for good." To those who do not know, it may be stated that Dixmont is the insane asylum just outside of Allegheny City.

AVOIDING THE FLOOD NEAR BINGHAMTON.

The test went to prove that the American automobile can go through road contions impossible for the ordinary horse and wagon. Many of the machines that were belated early in the run could have been brought up to the front rank if the men had been available, as practically all of the machines in the contest were, with the exception of a few minor necessary repairs, in as good condition when they reached Pittsburg as when they left New York.



THE PIERCE CARS IN THE ENDURANCE RUN.

The Pierce Stanhope, Driven by Percy Pierce. "Mechanic No. 15," Song Composer, on Front Seat.

The Pierce Arrow. Driven by Charles Sheppy. "First Aid to the Injured" Car.

Correspondence

Design of Planetary Gears.

Editor THE AUTOMOBILE:

Sir:—I am having a transmission gear made, and the firm that has the job does not seem able to assemble the planetary gears so they will work freely. The gear will give six forward changes of speed and two reverse, the slowest speed ratio being 24 to 1 from engine to rear wheels, and the fastest 2 to 1. A 16-tooth 8-pitch pinion is cut on the driving shaft. This drives three 20-tooth pinions, carried by studs which are fastened, equally distant from each other, on a housing that runs on the shaft. Each of these pinions is keyed to the hub of a 14-tooth pinion, and these drive a 22-tooth gear that runs on the driving shaft; also a 50-tooth internal gear which is fastened in a housing that runs on the hub of the 22-tooth gear.

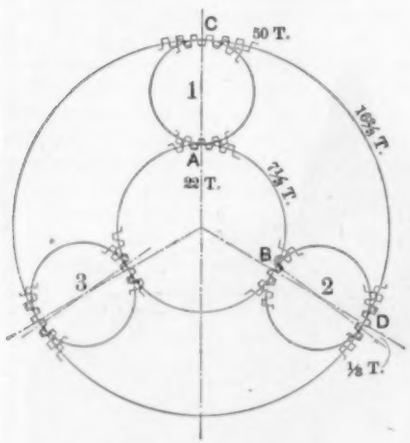
Should not this run smoothly if the 20 and 14-tooth pinions are properly put together? Would it work better if four sets of pinions were used instead of three? The foreman of the shop where the work is being done says that the number of teeth in all the gears must be divisible by the number of pinions between the internal and spur gear. Is this true?

What horsepower will a pair of miter gears of four inches pitch diameter, eight pitch and one and three-eighths inch face, running at from 600 to 800 r.p.m., transmit?

N. H. H.

Fostoria, O., Oct. 8.

A pair of spur and internal gears will always work correctly together if the number of teeth of each is divisible by the number of intermediate pinions, but it is not necessary that this should be the case.



In the sketch, which represents the case you describe, the distance from *A* to *B* on the 22-tooth gear will be 7 1-3 teeth. That is, if the first tooth is central on the line *A C* the seventh tooth will fall short of *B D* by one-third of the pitch or tooth-to-tooth distance. The corresponding space of pinion 2 will therefore be one-third of the pitch off from from *B D*, and the space diametrically opposite it, *N*, will also be one-third of the pitch ahead of *B D*, as shown. Now, one-third of fifty teeth is sixteen and two-thirds teeth, so that the sixteenth tooth from *C* will be two-thirds of the pitch short of *D*. The seventeenth tooth, being one-third of the pitch ahead of *D*, will correctly engage the corresponding space in pinion 2.

The same process, counting backward from *A* and *C*, shows that pinion 3 will likewise mesh. In the same way it may be shown that either two or four pinions would satisfy the conditions, but not five or six. The number of teeth in the pinions is not material so long as all are alike. It may be that the trouble is to be found in the way the 14-tooth and 20-tooth pinions are put together.

The miter gears named, if of steel, should transmit ten horsepower at 800 r.p.m.

Wants to Use Steel Tires.

Editor THE AUTOMOBILE:

Sir.—Why not use steel tires for racing machines?

Recent numerous fatalities of the track, caused by overloaded or defective tires, are good evidences that something better is required than the present pneumatic tires for high speed work.

I have for many years been an advocate of steel tires for high-powered automobiles of all kinds, for the reason that as far back as 1896, I built an automobile and equipped it with common wood wheels and steel tires, the same as those then and now in use upon thousands of spring delivery wagons, and this wagon is still in running order and the tires have not shown any injurious wear. It is true that the wagon has not been in continuous use, although it has run at least 4,000 miles.

The pneumatic tire came into use in the year 1890 and was primarily designed for use upon bicycles which depended for motive power upon the human frame. They have given excellent results upon low-powered machines, but when it comes to machines of 80 or 100 horsepower and running faster than a mile per minute upon a curved track, pneumatic tires are dangerous unless more carefully made and fitted to the wheel. Even then they are liable to burst if pumped up too hard, as they nearly always are upon heavy machines. Most drivers of heavy machines keep their tires pumped so hard that they would favorably compare in hardness to a steel tire, so far as effect on the road and vehicle is concerned.

Most pneumatics are circular in cross-section, so that when they are pumped hard and carry a heavy load, they readily embed themselves in the track unless the surface is very hard. I propose to equip all high-powered racing machines with flat steel tires with quite a wide face, depending upon the weight of the machine.

I am sure that a steel tire would be perfectly safe, as it would be securely bolted in position and could not possibly fly off the wheel, no matter how high the speed might become. Another advantage of the steel tire would be its flat surface, as it would not cut into the track like the round tires do. It necessary, the tires might have their edges flanged inwardly in order to present round surfaces at the edge, but they should have a large flat bearing surface between their edges.

I am at present engaged in designing a racing wheel with steel tires and expect soon to place it in use, and my expectation is that it will avoid all tire accidents.

At some time in the near future, I may prepare an article for THE AUTOMOBILE upon the subject of automobile tires, and therein show the comparative efficiency of steel and pneumatic tires for racing purposes.

There is no reason why the speed of an automobile should be limited by its tires, so that steel tires, such as I have above described, and the application of sufficient power to the vehicle, would necessarily cause the vehicle to exceed the recent world's record of 125 miles per hour attained by electric cars in Germany.

The speed of an automobile is only limited by the power and gear of its motors.

JACOB C. HIGDON, M. E.

St. Louis, Oct. 17, 1903.

What have our readers to say to this?

Mexico Not So Alluring.

Editor THE AUTOMOBILE:

Sir:—A correspondent has written from the City of Mexico a general complaint of the state of affairs here, and his communications have appeared in several automobile journals, one of them under the title of "A Wail from Mexico." His wail consists of a triple attack on the city government, the Waters Pierce Oil Company and the existing garages and repair shops.

As for the new regulations for the control of automobiles, they are based upon the rules now in effect in Paris, and were submitted to the governors of the Automobile Club of Mexico for revision prior to publication. They are reasonable, and are calculated to protect the rights of automobilists and the general public alike. The fee of $8 per month is not peculiar to automobiles, but is charged, and has been for years, on any pleasure vehicle, horse-drawn or otherwise. There is no reason why an automobile should be exempt from this general tax.

As to the Waters Pierce Company's price for gasoline, it is undoubtedly high.

We desire, however, to warn the optimistic mechanic or repair man whom the correspondent invites to come here and get rich, to check the aforesaid correspondent's figures before they invest their money in two or more large garages and repair shops in the City of Mexico.

We will give a few figures ourselves, merely to show the possible newcomers what they will be "up against" when they embark in the business here and cut under the exorbitant prices now prevailing.

We have a garage here of sufficient capacity to house all the automobiles now in operation in Mexico City, or say 150 vehicles. We have an electric charging plant capable of charging all the electric vehicles, say 50, now in operation here, and we are doing it. We have a force of men capable of repairing any automobile of any system or make provided it is not worn out or has special missing parts that cannot be procured here. For all cars sold by us we carry in stock such parts as are liable to be needed for replacement.

To owners of electric vehicles we charge for storage, cleaning, oiling, charging of batteries, pumping tires, testing of electrolyte and keeping batteries filled with same, as well as general attention to and oversight of all the running parts of vehicle, the sum of $40 Mexican silver per month, equivalent of exchange ruling here during last six months to between $15.40 and $18.20 U. S. currency. In other words, the owner of an electric vehicle in Mexico City can run 600 to 1,200 miles a month under a total maintenance and fuel charge of $15 to $18 U. S. currency. He needs no chauffeur nor servant, as we frequently send for and deliver his automobile at his residence without extra charge, although we do not bind ourselves to do so.

To owners of steam and gasoline cars we charge $20 per month (say $7.70 to $9.10) for storing, cleaning, oiling and attention. They furnish their own gasoline or we furnish it at cost.

Our garage is open every day, including Sundays, from 7 A. M. to 9 P. M. At that hour the doors are closed, but by ringing the bell at entrance, access can be obtained until 12 P. M. Cars are all washed at night and ready for use at 7 A. M. Eletric vehicles are also charged at night and ready for use in the morning. If brought in during the day and needed as soon as possible, they are put on charge at once.

Repairs are made at fair prices and in every case at a lower price than the same work would be done at any well regulated garage in the States. We do not consider the price of $3 Mex. Cy. ($1.35,) mentioned by the correspondent as exorbitant for patching a tire. We have frequently charged more. It depends on the tire and the patch.

As a matter of fact, we find that there is little repairing to be done to first-class automobiles which are handled intelligently. If the wailing correspondent had bought a good car in the first place, of a leading factory, and through an established local agent whose interest lay in having his machine as seldom under repair as possible, he would have found little occasion to pay repair bills.

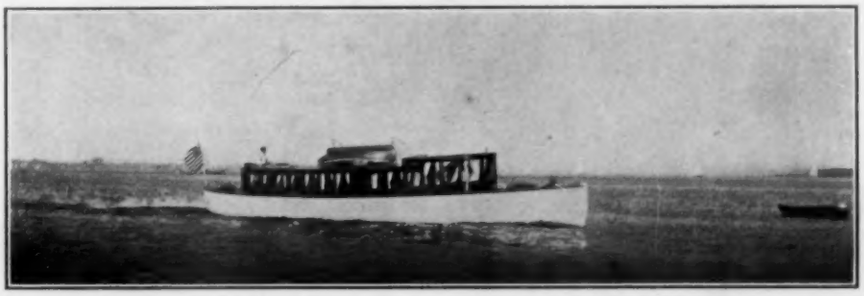
MEXICAN ELECTRIC VEHICLE COMPANY.
City of Mexico, Oct. 15.

Long Trial Trip with Fast Motor Boat.

From Rhode Island to Michigan in a Sixty-Foot Motor Boat of Eighty Horsepower in Two Engines.

Special Correspondence.

NEW LONDON, Conn., Oct. 15.—There has just been delivered to Mr. S. B. Kitchell of Coldwater, Michigan, a 60-foot full cabin speed launch which promises to make small-boat history for the great lakes. The boat was designed by Frederic S. Nock and built at his yards at East Greenwich, R. I. On her trip from Newport to her home-port, Put-in-Bay, where Mr. Kitchell has a summer home, her performance was all that her designer anticipated, and more. The illustrations give a very good idea of her appearance going at full speed and her beautiful lines. The length on deck is 60 feet, with waterline length of 57 feet, and extreme beam of 8 feet. The greatest draught is 2 feet, and under the propellers 2 feet 9 inches. Her power plant consists of two four-cylinder Buffalo motors capable of developing 40 horsepower each. The propellers are 29 1-2 inches diameter and 38-inch pitch. For an average speed of about 16 miles the motors turn up about 550 revolutions a minute, and when the stiffness has been worn out of the machines it is anticipated that the revolutions will be increased to 800.



SIXTY FOOT MOTOR BOAT OF 80 HP. AT FULL SPEED.

On the trip to the lakes a start was made from Newport at 7.15 A. M., standing up for Castle Hill. The wind was northeast by east, about 10 knots, and as it had been blowing all night there was considerable of a cross sea met on the run to Point Judith whistling buoy. Once fairly around the point and to the westward of the breakwater the sea was comparatively smooth except for the long rollers which were picked up by a south-easterly wind of several days' duration. The starboard engine was shut down soon after passing the breakwater, as the bearings were getting warm, and as soon as they were cool to some extent the engine was started again. The starting up of either engine, when one was running, was a very simple matter. One had merely to turn on the switch and throw in the clutch and the momentum of the propellers would start the motor.

When abreast of New London it was decided to run up to Mystic and Noank, and the boat was headed easterly, and when tied up to the dock at Noank it was just 10.05 A. M. After lunch a start was made at 2.30 P.M. and a run made to New Haven to the anchorage off the clubhouse, where she arrived at 6.03 P.M. This trip was made against a head tide and considerable time was lost by the compass being out of adjustment. This was not discovered until late in the afternoon, when the helmsman decided that Faulkner's Island should be visible directly ahead, and upon searching for the island with marine glasses it was discovered on the starboard quarter about four miles distant. Investigation proved that a key used to open the manhole plate on the forward deck was the cause of trouble with the compass.

STERN VIEW OF FULL CABIN 60-FOOT MOTOR BOAT.

On the following day the boat did not get under way until after 3 P. M., and as the wind was still fresh from the eastward it was decided to anchor for the night in

the harbor back of Sheffield Island. During this part of the trip several yachts were met and without exception she passed them all. On the third morning the wind was southeast and the weather cloudy, but it was thought best to make the remainder of the trip on this day. So getting under way at a few minutes after 8 o'clock, the course was laid for Execution Rocks. The seas were long and steering anything but a pleasure. The boat rode them well, but when she would get atop of an extra large wave the engines would turn over at a terrific rate and the spray fly from both sides of the bow, despite the fact that the wind was nearly aft. At a few minutes after 10 o'clock the boat had passed Whitestone and was once more in smooth water. The run from this point up through Hell Gate and Harlem River was without event. None of the tugs or river boats passed her and the only craft that could lay claim to going faster was a big steam yacht encountered at Sandy Point.

BOAT "MYSTERY" IN FLORIDA RIVER.

The engines had behaved nicely and both responded willingly when a spurt was needed. Above Morris Heights, Mr. Kitchell, the owner, was taken aboard and the trip continued to Cleveland, through river, canal and lakes. Part of this trip was made at the rate of over seventeen miles an hour and there were short spurts made at a speed that was nearer nineteen miles. She certainly acted fine in a seaway although some of the knowing ones prophesied that she would roll over. At no time did she take solid water over her bow or stern, and the center window in the pilot house was not closed while under way during the entire run. On the run to Albany the boat made 126 miles in eight hours and three minutes, part of which time she was running under one engine, and at no time were the engines run at full speed.

The accommodations, considering the fact that the boat was designed for speed, are excellent. She has a pilot-house seven feet long and the main cabin is seven feet six inches long, with toilet room and galley between the cabin and the engine room, which is ten feet long. The after cabin is nine feet long, and there are ample accommodations for several chairs on the after deck. The floor of the pilot-house is raised eighteen inches above the cabin floor, enabling the man at the wheel to get an unobstructed view fore and aft. The forward cabin is fitted with extension berths that form transoms in the daytime and good wide berths at night. The toilet room on the port side has a patent closet and folding lavatory. The galley on the starboard side has a large ice chest, a stove and dish lockers. In the engine room large lockers and chests of drawers are placed at the after end. The after cabin is fitted with extension berths and full length clothes presses of ample proportions. Under the after deck, which is flush, there is room for dress suit cases, deck chairs and no end of dunnage. The finish of the interior throughout, including the engine room and galley, is of mahogany. The exterior is finished in like manner. A small tender is carried on top the cabin, with davits to facilitate its handling.

The construction of the boat is about medium, with planking of yellow pine one inch thick at the garboards and seven-eighths inch at the sheer strake. The upper strakes are in one length from end to end, and all clamps, stringers, keel and keelson are in one length. The fastenings are brass screws. While built for a fast boat she is by no means a freak, but a good, wholesome craft suitable for cruising, capable of developing bursts of speed sufficient to make the average yacht look as though she were not moving at a very great rate of speed.

Log Towing by Motor Boat In Florida.

Photographs of the new 41-foot motor boat *Mystery*, taken on the St. John's River were received some time from Captain Meloy, of New Haven, who tried the experiment of having her built at a shipyard near Jacksonville last fall, the white oak frame being shipped there from Connecticut and the boat planked with Florida cypress, which is both abundant and cheap in "the Flowery Land." Her machinery was shipped south from Connecticut, and fitted to a "T."

Captain Meloy has used the boat with a 10-horsepower motor during the past winter in heavy towing work on the St. John's River. She has worked sixteen hours a day some of the time. The owner now intends to put in a 16-horsepower motor.

Many motor boats are engaged in towing log rafts in that section, says Captain Meloy, and the field for this and other work is good. Some of the Connecticut motor boats which were taken to Florida by the "inside route," as THE AUTOMOBILE has already told, are busily employed there the year around.

BACK FROM AN ALLIGATOR HUNT.

The first of the photographs shows a typical Florida scene, with the *Mystery* on the edge of a shoal of the wild hyacinths which are such a menace to navigation in that country. The second picture was made after the return of the boat from a trip on an alligator hunt among the saw grass.

Highway Commissioners' Chauffeur Fined.

Special Correspondence.

SPRINGFIELD, Mass., Oct. 24.—John Kelley, who is considered one of the most expert chauffeurs in this State, was fined $25 in the district court in Westfield this afternoon for the offense of fast driving of an automobile in that town about two weeks ago. The case is of interest for the reason that Kelley was at the time operating one of the two autos in which the members of the Massachusetts State Highway Commission were making their tour of inspection of the State roads of Western Massachusetts. The specific charge was that of violating the provisions of the State law which prohibits passing an intersection of highways at a higher rate of speed than eight miles an hour. By entering a plea of *nolo contendere* Kelley avoided losing his license. The cars did not contain the members of the commission at the time the offense was committed, they having gone from this city to Pittsfield, by train, where the machines were to meet them.

Woman Makes St. Louis-Chicago Record.

Mr. and Mrs. Pierre Cohuteau Scott of St. Louis and Henry S. Turner of New York recently established an automobile record from St. Louis to Chicago of fifty-four hours, Mrs. Scott operating the car throughout the trip. The distance is over 300 miles, and the roads at their best are never more than fairly good, so the record would be creditable even with a man at the steering wheel. The start from St. Louis was made at 10 o'clock A. M., October 19, and the party arrived at the Auditorium Annex in Chicago at 4 o'clock P. M., on Wednesday, the 21st.

A New Hampshire Enthusiast.

One of New England's most enthusiastic motorists is D. S. Burley, of Newburyport, Mass., who has made a number of trips from Newburyport to his summer home at East Lake, New Hampshire, in his White steam tonneau car. The accompanying photographs show characteristic bits of New England scenery which is met with on the way.

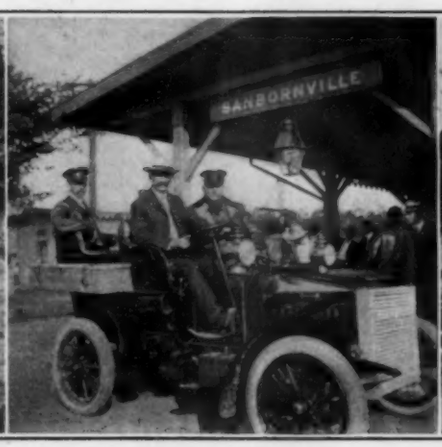
For the most part the roads in northern New England are in good repair, but in many places they are very narrow and rough, with many hills, so that touring is more picturesque than pleasant. The roads in New Hampshire, in the vicinity of Sanbornville and East Lake, offer little inducement to take long touring trips, and Mr. Burley confines the use of his big machine mainly to the usual thoroughfares which connect the quaint little villages in that section. He finds his car of especial use in making daily trips to and from the railroad station, which is six miles from his country home.

Town House Hill at Milton, 12 per cent.

Main Road to White Mountains.

At Camp Burley, East Lake.

Stuck in the Road near Milton, N. H.



Mr. Burley in His Steamer.

Along East Lake, N. H.—Sandy Road.

Mayor Johnson's Automobile Campaign.

CLEVELAND, Oct. 26.—Mayor Tom L. Johnson, Democratic candidate for governor, is winding up his famous "Red Devil" campaign in a most befitting manner. For three months he has been touring the State and his remarkable old car has touched nearly every county seat in Ohio besides hundreds of small towns. Now he is out looking after some of the doubtful districts and instead of one car, he has five automobiles in his caravan. He left Springfield last Wednesday with a party of fifteen spellbinders all in automobiles, not to mention the large party of circus people that have been traveling with the tents for months past.

Another Electric Tour to New York.

Closely following the accomplishment of F. A. Babcock, Jr., of Buffalo, whose Buffalo electric touring car was the first to be driven from Boston to New York, H. M. Wilson driving a Columbia service wagon built by the Electric Vehicle Company for the Edison Electric Illuminating Company of Boston, made the trip in four days. Night stops were made in Worcester, Springfield, New Haven and Stamford, and charges of two hours duration were made at Worcester, Springfield, Hartford, New Haven, Bridgeport and Stamford. The fifty-three mile run from Worcester to Springfield was made on one charge. The total cost of recharging for the 244-mile run was $7.50.

SKINNER'S IMPORTED LIGHT DE DION SIXTEEN-HP. RACING CAR.

Special Correspondence.

BOSTON, Mass., Oct. 26.—Since its arrival on this side of the Atlantic some weeks ago, much interest has been created in local automobile circles by Kenneth A. Skinner's sporty De Dion-Bouton Paris-Madrid racer. Boston is fairly used to seeing big machines of both domestic and foreign manufacture, but when this long, low car comes snorting along the street like a blooded horse restrained, the crowd stops and looks. To those who know the history of the car, its participation in that fatal race of last summer, gives it an added attraction. It is the first real foreign racing machine that Boston has seen and Mr. Skinner has had many callers who wished to examine the car at close range. As yet Mr. Skinner has had no opportunity to give the machine a fair trying out, his only run of note being from New York to Springfield by the way of Boston, with the other members of the Automobile Club of America. The car has been called by some the "White Streak," and this name fits it as well as any other. The car, which in reality is swung well off the ground, has the appearance of being very long and low and racy. It is painted white with brass trimmings. The hood over the engine adds to the lengthy appearance of the car for it is fully four feet long and finely tapered. Directly behind the hood are two seats set so low that the body of the operator gives little or no resistance to the wind. Back of the seats is a small hood covering the gasoline tanks and containing a receptacle for tools. The extra tire is strapped to the outside of the rear hood. The car weighs 1,600 pounds and the 2-cylinder engine develops 16-horse-power.

KENNETH SKINNER'S LIGHT DE DION RACER.

From Sport Circles in New York.

There is much that is mysterious in regard to racing cars now in course of manufacture and others which have been ordered from European makers. Providing all these mysterious reports be true, then there will be seen in America next season a great aggregation of American and European racing cars and programs will contain so many entries in each class that a number of heats will have to be run for each event. Closer racing and faster racing is certain to result. One handler of foreign cars is said to have sent an urgent order to the makers in Europe to hurry through a special car of under 1,200 pounds weight, another between 1,200 and 1,800; and still a third for the free-for-all class which they promise will be the greatest racing car ever seen in America. Several American makers are known to have in process of completion some wonderfully fast and very powerful cars. Several racing cars, it is said, were withheld from track competition this year owing to the many serious accidents, but these will be brought forth another season.

Doubtless many of the new racing cars will be seen at the Florida race meet at Daytona and Ormonde Beach. "Senator" Morgan, who has the arrangement of the affair in charge, said the other day: "There can be no adequate conception of the interest which is being taken in the coming meet. Why, the number of racing cars which will be present will surprise the most enthusiastic followers of the sport. In nearly every factory which I have visited racing cars are being worked upon now, and the Florida races are going to give the makers an opportunity to test these machines prior to the opening of the season's track racing. Many private owners of powerful foreign cars are also planning to strip their machines down to racing trim and try them out on this course."

In connection with the reports of so many new cars in course of presentation, it becomes apparent that quite a few drivers will be wanted for them. Experienced men will be sought for and it is quite probable that many a maker will be forced to search far and wide for a man suitable to drive a fast car. The makers will quite naturally turn to the cycle track, and there among the men who have driven fast motor pacing machines will be discovered talent hard to beat for the purpose desired, men with nerve and track knowledge, both essential.

A. J. Picard. the clever starter, gathers a great deal of information in his travels and does love to be mysterious. Picard impaparted this information the other day: "I have been sworn to secrecy, but I can tell you this much. There are at least three runabouts now completed which will cause a general stir when the shows come around. They are dandies and brand new." No amount of persuasion could induce Mr. Picard to reveal the weighty secret, for unlike a woman he could keep at least a part of what was told him to himself. However it is known that he has a secret and someone may find the way to worm it out of him. Doubtless there will be other surprises when the show comes off, but that there will be three the versatile Mr. Picard is authority for, so the shows won't be barren of interest.

In resigning his position as secretary of the Empire City race track, Alfred Reeves caused general surprise in the automobile world, where it was long thought that after his three great and successful race meets this season, he would surely be a fixture. According to reliable information Reeves made for the track owners a profit of $8,000 on the three meets, and the large attendances would seem to bear out the report. It is also said that the track made money for the first time this season, Reeves having managed the affairs but the one season. The future of the pouplar promoter seems to be in doubt but there is a report that he

will take an active interest in automobile race promoting hereafter. The report cannot be verified as the Secretary has gone to Florida for a month of rest prior to taking up his work as press agent of the New York Automobile Show, work performed by him in an exceptionally pleasing manner last year.

One of the special racing cars withheld from the public gaze after the accidents which occurred in automobile racing this season, was the Stevens-Duryea which, however, will be given an inning, it is now reported, on the beach down in Florida during the race meet in January and then, if successful, be placed upon the track next season.

There is being turned out at the factory of the Electric Vehicle Company at Hartford, a racer for which much is promised next season. The Columbia will be fast and will be driven by a man capable of securing from it the greatest possible speed.

When in Philadelphia recently Barney Oldfield was besought by Mrs. George Banker, wife of the proprietor of Banker Brothers Philadelphia headquarters, to take her out for a spin over the Point Breeze track. Oldfield finally consented and Mrs. Banker was carried along at the rate of 1:06 to the mile for a number of miles. All through the ride Mrs. Banker begged Barney to take her faster yet, and she was not at all satisfied with 1:06.

Tom Cooper, the erstwhile champion of the cycle path, graduate to the automobile racing field where he developed Barney Oldfield in the Ford-Cooper racer, No. 999, has decided to quit the racing game and take up the manufactureing end of the business. Cooper's 999 was a total wreck after the fatal accident to Frank B Day, at Milwaukee, and the twin to 999 which Cooper drove himself, has been relegated to the scrap heap at Detroit where it stands out in the storms day after day without attention and without thought. Cooper has found a berth with the Matheson Car Company of Grand Rapids, having secured an interest in the company, it is said. The Matheson company also has a car which was constructed for the International Cup Race and which is now for sale, so it is probable Cooper will drive no car for that company.

Charles W. Miller, the greatest six-day cycle rider ever known, is anxious to enter the automobile field as a driver of a racing car. Miller has written to friends asking them to find him a position. Last winter at the Chicago automobile show Miller purchased a Thomas machine which he has driven all the season. Of his nerve and daring there can be no doubt, and his name would be a sterling drawing card when connected with any car, for Miller's victories on the cycle path were cheered in days of old by millions of people.

PRIZES FOR OCEAN TO OCEAN RACE SOMETIME NEXT YEAR.

America is to have a transcontinental race from ocean to ocean. William R. Hearst, proprietor of a chain of daily papers in New York, Chicago and San Francisco will offer for such a contest a $1,000 cup and give to each contestant a valuable medal. No definite time has been set for the running of the race, but the date will be set, probably for next spring. Complete details are not ready for announcement now but will be made known within a month. The routing will be in all probability the same as that of the New York *Journal* and San Francisco relay race on bicycles some years ago, although the late experiences of Messrs. Krarup and Fetch in "Old Pacific," L. L. Whitman in the Olds, and Dr. Jackson in the Winton will be taken into consideration in the laying out of the course. An elaborate system of checking stations will be arranged in order that there may be no doubt of the authenticity of running on the part of any car. As at present contemplated, the competitors may be privileged to start from either side of the continent at the same hour to cross the country. From fifteen to fifty competitors are expected to take part, some assurances having already been gained. Some of the more prominent European road drivers will be induced to enter, making the affair of international importance. No stress will be laid upon the amount of weight to be carried, as was the case on the Endurance Run, each driver being privileged to go out alone should he so desire, but the cars may be classified in some satisfactory manner as the promoters feel it hardly just to pit the lighter machines against the larger and more powerful cars.

As regards breaking the rules of the country in such a contest, the contestants will be required to live up to the laws of each section passed through. The competitors themselves will be the sufferers if held up for too great speed. Each will be started and will then go through to the finish as he pleases, but quite naturally will obey the laws rather than lose valuable time by being taken to court. The contest will probably consume the better part of fifty days and perhaps longer, but if started from the Pacific Coast before the warmer months will be a much faster contest it is thought.

KILOMETER RECORD IN MONSTER MORS DRIVEN BY ROLLS.

Special Correspondence.

LONDON, Oct. 16.—Particulars of the world's record for the kilometer which the Hon. C. S. Rolls attained on Monday last, in the Duke of Portland's Park, at Welbeck, are briefly as follows: The car which Mr. Rolls drove on this occasion was a Mors of 110-horsepower, specially constructed, and the time in which he completed the distance of the kilometer was 26 2-5 seconds, which constitutes a world's record for any type of car on any course, for it beats the Welbeck record previously held by Mr. Rolls, and also the performance of the Baron de Forest at Phoenix Park, Dublin. The performance was timed by Messrs. Harry J. Swindley and D. Straight, who are the official timekeepers of the Automobile Club of Great Britain. The previous best records for the kilometer were, M. Augieres, in 29 sec. (in France), the Hon. C. S. Rolls, 27 sec., at Welbeck (at the beginning of this year), and the Baron de Forest's 26 3-5 sec., at Phoenix Part, Dublin.

The Automobile Club de France has decided to choose the French competitors for next year's Gordon Bennett race by eliminative trials, making the Panhard and Mors companies take chances with other competitors.

HON. C. S. ROLLS IN HIS 110-HP. MORS RACER—KILOMETER, 26 2-5 S.

Racing Abroad.—Chateau-Thierry Tests.

The annual hill-climbing trials at Chateau-Thierry, under the auspices of *L'Auto*, were held this year on October 4. Their success was unmarred by any accident, and was made notable by the extraordinary speeds of the new high-powered racers. As usual, the tests were held over a measured kilometer, but on account of the high power of some of the contestants a standing start was the rule this year, by which an awkward turn was avoided which would otherwise have to be taken at full speed. The first 150 yards of the course are paved with granite blocks, and the grade is moderate, but from there it increases gradually up to 9 or 10 per cent. at the end, making a very good test of hill-climbing powers. The course, lined with trees on both sides, was barred to traffic during the test, and no one was allowed on it but the officials and signalers.

Touring cars form a regular category in all French road tests nowadays, and the morning was devoted to these. They were classified according to their selling price, as is now usual. As the only criterion of a touring car was that it should have a tonneau and carry its full complement, several machines that competed in the racers' trials later classified as tourists for this event by attaching temporary tonneaus, and naturally carried off the honors. Among these were Gabriel's 80-horsepower Mors, a light 30-horsepower Darracq driven by Beconnais, and a 60-horsepower Panhard driven by Heath. Their times for the kilometer were 56 2-5 s., 56 2-5 s., and 1 m. 3 2-5 s., respectively. Among the genuine touring cars, the best performance was that of a 12-horsepower Gardiner-Serpollet driven by Pelzer, whose time was 1:15 2-5. As its weight was about 1,000 kilogs., its actual horsepower was probably considably above the rating. Among the other machines in this category, a 40-hp. Gobron-Brillie and several Peugeot, Knap, and other motor bicycles rated at 2 and 3 hp. made times from 1:20 to 1:30, and an 8-hp. Ader voiturette of 450 kilogs. achieved the honors in its class, with a time of 2:25 3-5.

GOBRON-BRILLIE 110-HP. RACER AT THE HILL-CLIMBING TRIALS.
1. Rigolly with his Car. 2. Testing the Pump. 3. Oiling the Big Machine.

Rain in the afternoon interrupted the tests of the racing cars, and these were completed early the next day, when Rigolly on the 110-hp. Gobron-Brillie swept all before him with a time of 45 1-5 seconds. This works out to nearly forty-eight miles per hour—and from a standing start at that. A dog getting under his car spoiled the first attempt and nearly caused a disaster, so a second start was made. Duray in another Gobron-Brillie of the same power was a close second in 45 2-5. The 30-hp. Gardner-Serpollet of Le Blon lost its chance of success by slowing down too soon. Its time was 49 1-5. Four Darracqs of 30 and 20 hp. all apparently pared down to the extreme of lightness, made from 50 2-5 to 52 3-5 seconds; and two Richard-Brazier cars did 50 1-5 and 52 4-5, respectively. Five others made the ascent in less than one minute, and De la Touloubre, in a 24-hp. Decauville of 640 kilogs., made a creditable performance in 1:04 3-5. Few even of the voiturettes had less than 20 hp., though they could not weigh over 400 kilogs., so it may be judged that this contest was one of racing machines pure and simple. As the photographs show, nearly all contestants in this category were stripped down to the chassis and a single racing seat.

CONTRASTS IN MOTOR BICYCLES AT CHATEAU THIERRY.
1. Mme. Clouet with 1 3-4 Georgia Knap Bicycle. 2. Maurice Fournier with 4-cylinder Clement.

Among the illustrations, especial interest attaches to the group of three views of the

110-horsepower Gobron-Brillie. The unusual height of the cylinders is due to the Gobron-Brillie plan of working two pistons —in opposite directions—in each cylinder.

TOURIST CLASS—COUNT DE MAIGRET.

AT THE START—GABRIEL'S 80-HP. MORS.

The extreme lightness of the tubular trussed frame will also be noted. In the middle view the pump is throwing a stream of water to test the circulation. The third picture shows Rigolly measuring out some lubricating oil. It is said that forty litres of oil are required to fill the lubricating tanks of this monster machine.

The photograph of Count de Maigret in his 40-hp. Gobron-Brillie does not indicate the grade to advantage, perhaps because the camera was pointed down the hill, but it gives a good view of the perfect road surface and the neat stone-lined gutters. Lamberjack is shown in the small view with the Griffon 110-pound motor bicycle which made the hill in 55 3-5 seconds, the best time for its class. Wagner's 30-hp. Darracq captured first honors in the voiturette class—limit 1,430 pounds—its time being 50 4-5 seconds.

The form and style of the little 1 3-4-hp. Knap motor bicycle are well shown. This make of machine will be remembered as having won first place in recent consumption tests. The big four-cylinder Clement motorcycle, driven by Maurice Fournier, was not regularly entered, but it made a trial of the hill in 55 3-5 seconds.

Speeding Over Endurance Route.

The Stearns car which took part in the endurance run left Pittsburg Thursday morning, Oct 22, at 6.30 and made a remarkable run to Cleveland, completing the first leg in the attempt to establish a low record over the New York-Cleveland-Pittsburg course. The car drew up at the Hollenden Hotel at 3.40 P. M., making the actual running time eight hours and twenty minutes, deducting an hour for lunch. A tire exploded near Chagrin Falls, causing a loss of twenty minutes, but otherwise there were no delays. The car was operated by James F. Patton, who was accompanied by E. Tom Fetch, the transcontinental tourist. A short stop was made at the factory in Cleveland and the car went on to Ashtabula, where the first night was spent after a day's run of 191 miles.

Nearing Erie on Friday the men ran into a heavy rain, and were only able to make Buffalo on that day. When heard from on Saturday, the 24th, they were nearing Bath, but had given up the hope of completing the run in three days.

New York was reached on Wednesday of this week at 8.30 A. M. Messrs. Patton and Fetch stated that the condition of the roads and the weather made record driving impossible. The actual running time, they claim, was fifty-nine hours.

LAMBERJACK AWAITING THE WORD.

Track For Testing Rambleis.

The Thomas B. Jeffery Company of Kenosha, Wis., now has an excellent half-mile track around its factory on which the automobiles made by the company will receive a thorough testing. Heretofore the machines have been driven over the country roads, but hard rains and bad weather make these roads almost impossible for driving and cause a great deal of trouble owing to the cleaning process the cars have to undergo at the close of a more than ordinarily severe test. Mr. Jeffery went to a considerable expense to construct a track and he did a good job while at it. The turns are well banked and the track surface is of gravel well rolled.

WAGNER IN THE WINNING 30-HP. DARRACQ.

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SATURDAY, OCTOBER 31, 1903.

RED TAPE IN CONTESTS.

Institutions have a tendency to survive themselves. Their outer form remains after their usefulness has departed. Many have come to think lately that formal "reliability trials" or "endurance runs," judged on the point system and involving penalties for doing things that any sane motorist ought to do when he uses his car for the purposes for which it is intended—belong to that class of institutions. In a rapidly moving art and industry the usefulness of things and schemes is naturally brief, especially if they represent a compromise with temporary conditions. The reliability trial was never more than a compromise. It took the place of road races, mainly because there were legal obstacles to racing, and the more or less scientific point system was grafted on it to compensate for the lack of spectacular interest. The non-stop clause that has encumbered most of these trials gave them a semblance of severity that impressed the doubting populace, and even possessed some intrinsic merit at the time when ignition troubles in gasoline motor cars were frequent and poorly understood.

In a few years, however, the whole complexion of automobilism has changed. It *was* a question of faith in the merits of automobiles in general whether a man would purchase a car or not. That faith has now become universal, or nearly so, and races and public tests have had something to do with the rapidity of the conversion. But by this change questions of price and of nice discrimination between machines according to their design and special features have come into the foreground, and for the decision of these questions the supposedly fine scientific points in the award system used for endurance runs have proved unsuitable. It is a matter of common knowledge that the advertising value for any one car in endurance contests has depended upon its general ability to travel with fair speed and a minimum of serious interruptions under all sorts of road conditions, and that strict adherence to the point system added nothing to and detracted nothing from the general verdict as to the relative merits of the various cars. As a matter of fact the accurate results in points have never yet been published until after all popular interest in the event had died out.

With these factors in mind it is easy to understand that some impatience has developed in regard to preserving the "red tape" of pseudo-scientific rules for future endurance contests. Construction has advanced to a degree of complexity and relative perfection where theoretical rules of any kind become too coarse an instrument for measuring quality in an automobile. They must give room for the more subtle accuracy of general good judgment.

And herein lies the sufficient explanation for the demand, now voiced in many quarters, that the next large automobile demonstration shall be held under touring conditions and largely under go-as-you-please forms. It has become understood that forced marches over flooded roads involve hazards that may be very unequal for the various cars, so unequal indeed as to drown all difference in quality between them if the road chance is against one and favors the other.

In order to maintain a clear vision of the factors which really mean quality in automobiles it will be necessary to eliminate the road and weather hazards that a rational *paterfamilias* would exclude in his daily use of a car and also the superannuated system of judging results by arbitrary rules and points.

THE LIMIT OF SPEED.

According to recent press dispatches, the electric railway speed tests in progress near Zossen, Germany, have within the past week resulted in a speed of slightly over 130 miles per hour being attained. This prodigious velocity is said to have been unattended with any especial vibration or other discomfort to the passengers on the 1000-horsepower experimental car. Needless to say, it is the highest vehicular speed yet attained; and it would seem also to put the maximum of rail velocity safely beyond the competition of anything on the highway.

It is worth noting, at all events, that for these speeds a special roadbed, with heavy rails and bevel instead of butt joints, has been necessary, as the older roadbed began to give way at a 90-mile speed. Moreover, power is applied to four out of the six axles of the car. Both of these conditions will be recognized as having their substantial parallels in automobile work. The most serious technical problem to be met in racing machine design is to keep the wheels on the ground; and when only half the weight of the car is on the driving wheels the difficulty of this problem is enormously enhanced. In spite of the great adhesion of rubber, it seems hardly probable that speeds much exceeding ninety miles per hour will ever be reached on the road with two-wheel drive, unless at enormous and ruinous cost in tires.

PRACTICAL PHILANTHROPY.

A wrinkle wearing an outward and pleasing aspect of novelty is the presentation, by makers of automobiles or parts, of cups to be competed for in the track races of the season. A little help of this sort cannot fail to be appreciated by the worried track managers, who are well known to be at their wits' ends for inducements to soften the hearts of the haughty chauffeurs and prevail upon them to come and rescue their meets from failure. And if the thing is properly managed—dare we say "worked"?—a little of it will go a surprising way. It never does to inspect a gift-horse too closely, and if the donor of the costly trophy chooses to stipulate that contestants for it must be members of this or that association, whose business is it but his own? It hurts nobody else, and it helps the association. If, moreover, he sees fit to require that it be won not once, but twice, or thrice, or a dozen times, before possession becomes final, who can object? The glory of final triumph is so much the greater, and the temporary possessors have the satisfaction of temporary glory and of a little extra publicity. In fact, the more temporary possessors there be the more generally diffused will the satisfaction become. And meanwhile, of course—but this is a mere detail—the donors of the much-fought-for prize will have the bliss of seeing their names mentioned in the papers every time the precious bauble is contended for anew: and the pure joy which fills the breast of the guileless business man every time he sees his name in print is too precious to be mentioned lightly. It is worth the cup—many times over.

The popular idea that the automobile will before long invade the field of the trolley car and whisk the suburbanite to and from his place of business at a nickel per ride displays a vitality which is certainly curious, in view of the rapid out-

growing of nearly all others of the early misconceptions regarding the motor road vehicle. Automobile builders do not talk that way now, and the notion is met with most often among persons who dislike the fast private machines and yet hesitate to profess themselves enemies of progress. They are honest, of course, in their beliefs, but they wholly fail to appreciate the economy in power and rolling stock which comes with rail locomotion, and the saving in cost of equipment and repairs which comes with power distribution from a central station. The automobile has its own field, which it does—or will—fill to perfection; but it is not and never can be the field of the trolley car. However, if the good people referred to must choose between a friendship for the automobile conditioned on their hopes of its future, and an out-and-out hostility to the same, it would be a pity to disturb their hopes. By the time they have adjusted hopes to facts the automobile itself will have become adjusted to the other facts of life, and complaint will be silent.

Club to Hold Winter Trials.

The contest committee of the A. C. A. has decided to hold a test for commerical vehicles in New York some time in February. The idea is to demonstrate the efficiency of the business automobiles under the most adverse conditions, when traffic is most impeded by ice and snow. As yet no definite plans for the test have been arranged.

Farcical Auction a Failure.

The recent auction sales conducted at the Grand Central Palace, New York, are reported to have been farcical and profitable only to the auctioneer, who received 5 per cent. for every car entered and 10 per cent. for every car actually sold. Many were apparently sold that were not in reality disposed of as the entrants themselves bought them back through dummy purchasers who were there to bid the prices up. Several agents and dealers who were approached and asked to enter cars refused to do so. The prices for cars really disposed of were small and deals were unprofitable in the extreme. One car which had been traded in by a local tradesman and entered in the sale with a $1,000 mark brought $1,250, and this was the highest price secured during the day.

Preserving the Mud.

Many of the cars which passed through the Endurance Run are being tenderly treated these days, for the makers are afraid that the congealed mud covering which was secured along the run will cake and drop away. The proud makers want to have their cars on exhibition at the show as nearly as possible to the condition they finished the 800-mile trip. Not a nut nor a bolt will be touched in many of them as adjustment will not be found necessary.

NOMINATIONS FOR A.C.A. OFFICERS SCARRITT FOR PRESIDENT.

All indications point to the election of Winthrop E Scarritt as the next president of the Automobile Club of America. Albert R. Shattuck, the present incumbent, declined to allow the nominating committee to present him as a candidate, and Mr. Scarritt, the first vice-president, was asked to allow his name to be placed at the head of the ticket. In view of the fact that Mr. Scarritt had positively declined to run for a third term in office, Mr. Scarritt said that, should it develop that there is a general desire for him to accept the nomination, he will endeavor to arrange his business connections to permit him to run for the office with the assurance that he will be able to give the necessary attention to the affairs of the A. C. A.

The nominating committee, made up of George F. Chamberlin, chairman; H. Rogers Winthrop and S. T. Davis, Jr., made its report to the Board of Governors at noon on Wednesday. Following are the nominations: President, Winthrop E. Scarritt; first vice-president, Henry Rogers Winthrop; second vice-president, William K Vanderbilt, Jr.; third vice-president, Harry Payne Whitney; treasurer, Jefferson Seligman; governors, 1906, Dave H. Morris, Sidney Dillon Ripley and Albert R. Shattuck; governors, 1904, Harlan W. Whipple and Arthur Iselin.

The election will be held on Monday, November 16, at 4 o'clock p. m.

There will be a rendezvous of A. C. A. members at Minder's Hotel, on the Coney Island Boulevard, to-day, for a luncheon at 12 o'clock. After luncheon it is proposed to attend the race meet of the Long Island Automobile Club at the Brighton Beach track.

Must Take Overdue Autos.

The failure by a French manufacturer to deliver an automobile upon the date contracted, even should it result in the spoiling of a summer holiday for the unfortunate purchaser, does not, according to the French courts, invalidate the contract, nor can damages be obtained for failure to deliver the car upon the date specified in the contract.

BUFFALO DEALERS TO HOLD SHOW FOR CLUB'S BENEFIT.

Special Correspondence.

BUFFALO, Oct. 26.—The Automobile Dealers' Association of Buffalo was formed here a few days ago. The dealers of the city gathered in the colonial parlors of the Genesee Hotel, effected an organization and elected officers as follows: President, E. R. Thomas; vice-president, W. C. Jaynes; secretary, D. H. Lewis; treasurer, H. C. Wilcox. It is highly probable that the membership will be extended to include the dealers in sundries.

W. C. Jaynes and Fred J. Wagner, who last March conducted at Convention Hall what was pronounced a most successful automobile show, informed the new association that they held the option on the building for the week of March 6 next, but would turn it over to the association, so the dealers decided to conduct a show at that time. The net profits of this show will go to the Automobile Club of Buffalo, which had previously intended to conduct the show.

To Bring Panhards Up to Date.

Having just established a depot for parts and a repair shop for Panhard cars on Thirteenth Street, in New York, Andre Massenat, an emissary of the Panhard Company, said, with regard to his further plans: "We expect to import many Krebs carbureters and shall attach them to existing Panhard cars of any model on order. The equipment will include a new steering wheel and tubular piller and the carbureter proper, selling complete in this country for about $240. There are two extra spokes in the steering wheel; one is turned to regulate the spark and the other to accelerate the motor. These spokes are connected to the motor by mechanism inside of the steering pillar, and this is the reason that a new tubular steering pillar is required when we fit the Krebs carbureter to an old car. When a car is fitted with the new carbureter and the new steering wheel and pillar, I can drive it from the Battery to Harlem without changing gear once. I can make the car go very slow and then fast, like the wind, just with my hands, so." Here Mr. Massenat gripped an imaginary handle in each hand and twisted it from right to left.

Shattuck & Sons in Difficulties.

Special Correspondence.

LOWELL, Mass., Oct. 27.—It has been announced that Horace B. Shattuck & Sons, dealers in hardware, bicycles and automobiles in Lowell, Boston and Providence, have failed. The firm is one of the oldest in the city, and though the main business here is in hardware, in the other cities, especially at the summer branch in Newport, the trade is confined almost exclusively to automobiles and bicycles. The liabilities are not yet known, but it is probable that they will reach $400,000. In February last the Lowell house suffered a $25,000 loss by fire, which was only partially covered by insurance. Then came the mill strike, during which the Lowell end of the business was at a standstill. The failure was precipitated by an attachment placed upon Horace B. Shattuck's property here and in Boston about ten days ago in an action brought against Mr. Shattuck as a result of a fatal accident alleged to have been caused by one of the firm's automobiles in Boston on May 18. The firm hopes that the creditors will be agreeable to terms by which it may continue the business.

News Notes and Trade Items.

Fred Illsley has succeeded Banker Brothers as the Chicago agent for the Peerless cars.

J. A. Clark of Herkimer, N. Y., is now placing on the market a new gasoline car which he has named the Herkimer Roadster.

Ralph A. Coburn has been appointed local manager of the Boston salesroom for the Crest Manufacturing Company at 182 Columbus Avenue.

The two Franklin cars that went through the endurance run to Pittsburg escaped without tire troubles, the breaking of springs, or the bursting or bending of any parts.

Bliss-Chester Company, Providence, R. I., manufacturer of radiators and wire terminals, has recently added considerable machinery to its plant in order to facilitate the manufacture of large radiators.

James B. Dill and ten other prominent New York automobilists have commenced negotiations to buy the Waverley Inn, in Cheshire, Conn., to convert it into a country club and automobile station.

The entire business of the Brecht Automobile Company, of St. Louis, Mo., has been purchased by H. F. Borbein, of St. Louis, who will fill any outstanding contracts that the company may have unfilled.

George W. Bennett, representative of the Thomas B. Jeffery Company, is in New York to secure a location for a New York branch store to take the place of the agency heretofore maintained in a department store.

Clarence M. Brockway, who has been assistant manager of the Cleveland store of the Winton Motor Carriage Company, has been made manager, succeeding Chas. B. Shanks, now general manager of the sales department.

The Hayden-Croninger Automobile Company has been incorporated in Chicago, with $10,000 capital, to manufacture automobiles and automobile parts. John A. Hayden, R. Harry Croninger and William M. Lawton are the incorporators.

Smith & Mabley, Incorporated, Fishkill-on-the-Hudson, has been incorporated to manufacture automobiles and other vehicles, with $500,000 capital. The directors are C. M. Hamilton and J. A. Djerf of New York and J. H. Richards of Brooklyn.

J. A. Place, Geneva, N. Y., who has been active in the automobile trade in that place for the past year, has opened up a new garage at 44 Linden Street, where tourists as well as resident automobilists are assured of the best of service. The building is three stories high, and a well-equipped machine shop places the Geneva garage on a footing with the best garages in the State.

The North Jersey Motor Car Company has succeeded to the automobile business formerly conducted by J. M. Schmidt at Brick Church, N. J. Mr. Schmidt has opened an agency near by and will handle White steamers and Waverley electrics.

Mr. and Mrs. A. L. Riker, who started back from Pittsburg over the Endurance Run course, after finishing in the contest, reached New York on Wednesday of this week, after being delayed by snow and mud between Cleveland and Manhattan.

The Pope Manufacturing Company, with offices and salesroom at 12 Warren Street, has been made the selling agent for New York for the Pope Motor Car Company of Toledo, O. The garage and uptown headquarters is at 1711 Broadway, and Elliot Mason has been made manager.

The H. J. Koehler Sporting Goods Company of Newark, N. J., has purchased the Orange Automobile Exchange in Orange. Mr. Koehler has the agency for the Rambler, Ford, Stevens-Duryea and Toledo cars, and the Orange garage will greatly facilitate his covering his territory.

The Packard Motor Car Company, Detroit, Mich., has given the Union Trust Company a trust mortgage to cover an issue of $250,000 6 per cent. gold bonds, which will not be placed on the market, having been taken by the stockholders. The bonds were issued to provide working capital.

The Steam Carriage Boiler Company of Oswego, N. Y., have installed a new and expensive lot of special machinery for the purpose of turning out their kerosene burner. These burners are specially designed for use on steam automobiles, and the above company are now taking orders for them.

A new and modern factory, 60 by 250 feet in dimensions, giving 15,000 square feet floor space on the ground floor, is now occupied by the American Roller Bearing Company, at South Framingham, Mass. The increased manufacturing facilities will enable the company to double its last season's output.

Harry Unwin, secretary of the National Association of Automobile Manufacturers, has resigned to accept a position as auditor with the Virginia Portland Cement Company of Craigsville, Va. The Craigsville company is owned by parties who were largely interested in the Overman Automobile Company of Chicopee Falls, Mass., several years ago, at which time Mr. Unwin was in its employ. Dane E. Rianhard, formerly treasurer of the Overman company is secretary of the Virginia Portland Cement Company. Mr. Unwin will leave New York for Craigsville early next week.

The American Veneer Company, formerly located at 449-455 Pacific Avenue, Jersey City, N. J., in order to properly handle its rapidly increasing business, has been compelled to seek larger quarters, and has removed to a new factory building, 75 by 200 feet in dimensions and three stories high at New Orange, N. J.

On the petition of the Hartford Rubber Works Company, Hartford, Conn., the Circuit Court in Milwaukee, Wis., has appointed attorney Fred Nohl receiver of the T. M. Brown Company, the Milwaukee manufacturer of carriages. The petitioner is judgment creditor for $561.21, and it is alleged that an execution was returned unsatisfied.

H. E. Fredrickson of Omaha, Nebr., has taken the agency for the Knox cars for Omaha and surrounding territory. He also handles the Rambler and Peerless cars, and Charles Stutz, who has had several years of experience in the building department of the Peerless Motor Car Company, is now connected with Mr. Fredrickson in the interest of the Peerless cars in Omaha.

The Warner Differential Gear Company, Muncie, Ind., manufacturer of spur differential gears, has reorganized, changing its name to the Warner Gear Company, with a rating of $200,000. A large addition to the former plant is being erected, and considerable new machinery is being installed to take care of the increasing demand for the Warner differential gears, which are made in four sizes, both in sprocket drive and bevel gear drive.

Andre Massenat, representing the Panhard et Levassor Company of France, who has been in this country for several weeks with the object of establishing an American branch, as was reported in THE AUTOMOBILE of October 10, has leased a new three-story and basement brick building at 230-232 West Thirteenth Street, New York, which is now being fitted up as a sales agency for motor boats, the mechanism for which is to be imported from the French works, and a depot for Panhard parts and accessories. A well-appointed repair shop also is to be included in the establishment.

The Winton Motor Carriage Company, Cleveland, O., has appointed Charles B. Shanks, late manager of the company's Cleveland branch and also advertising manager for the company, general sales manager. Mr. Shanks therefore has taken charge of the sale of the company's entire output and he will also, as heretofore, direct the affairs of the company's bureau of publicity. Mr. Shanks recently made a trip through the West and called on all the leading Winton agents in that section. The publicity department has been removed form the downtown store to the offices at the factory, where Mr. Shanks will make his headquarters.